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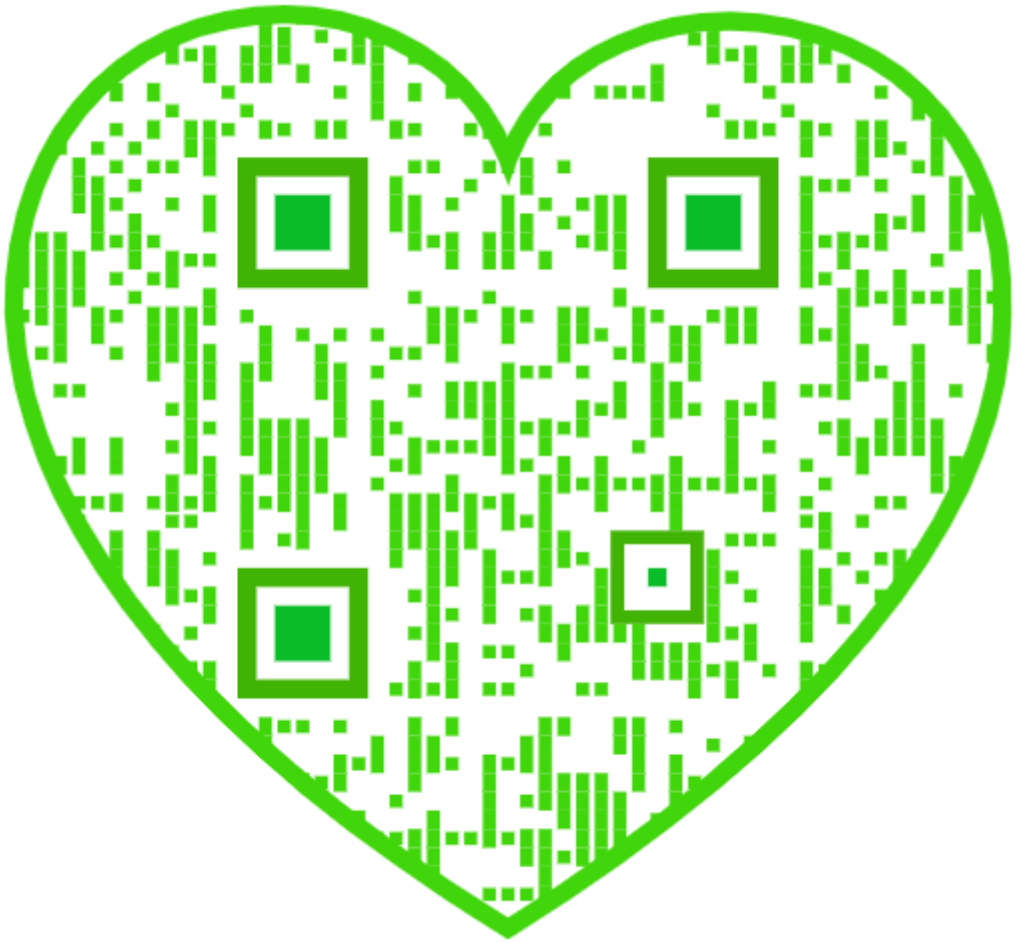

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TEMPLE OF NEPTUNE, PAESTUM

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, JANUARY 3, 1917 NUMBER 2141

LIVING ROOM IN NEW WING

ALTERATIONS TO HOUSE OF EDWARD C. DELAFIELD, ESQ., RIVERDALE-ON-HUDSON, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

THE CRAFTSMAN IN ARCHITECTURAL WOODWORK

By MORTIMER E. FREEHOF

Illustrated by Sketches by the Author and by Photographs.

THE architect's success is usually measured by the artisan's capability. The general public, who, when all is said, constitute the only real jury, can only judge from the finished product. They must necessarily base their opinions upon the interpretation, rather than upon the original conception, presented by the designer's drawings. The composer is only as great as the musical technician makes him, and Chopin and Mendelssohn, rendered by an unproficient performer, would be but ill received by an audience. Equally, a well designed building, poorly executed, finds little favor in the public eye, and criticism reflects back to the architect. On the other hand, nothing is detracted from the

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credit due the successful architect. No amount of skilled workmanship can atone for the lack of fundamental creative genius. However, there is too great a tendency to keep the workmen in the background, and to slight the importance of their functions. It is with these obscure ones, then, in an attempt to arouse a thought in the interest of the craftsman, that this article deals. Naturally, the field is a large one and embraces many departments. One of the most important of these, and possibly, too, the largest, is finished wood-working. Any illustrations for such a text must tend, again, to suggest the designer. It should be noted, therefore, that the sketches herein offered have been taken from the executed result, and not from the preconceived suggestion.

The craftsman of long ago was in himself more artist than artisan. He worked with a great amount of personal feeling, and each bit of his work had a strong and decided individual touch. It is to this fact that is owed the great interest inherent in the examples we know. Two objects alike in use and general design invariably show distinctive differences in character, and convey the impression of being alive with human feeling. Of the wood-work of the ancients little is left to us for study; the perishable nature of the material allows us only to conjecture. The middle ages are replete with a priceless store of suggestive information. It may be interesting, in this connection, to delve into this fund from the workman's point of view, in order to note how much more effective would be modern examples if this intimate personal appreciation

MANTEL IN LIVING ROOM IN NEW WING

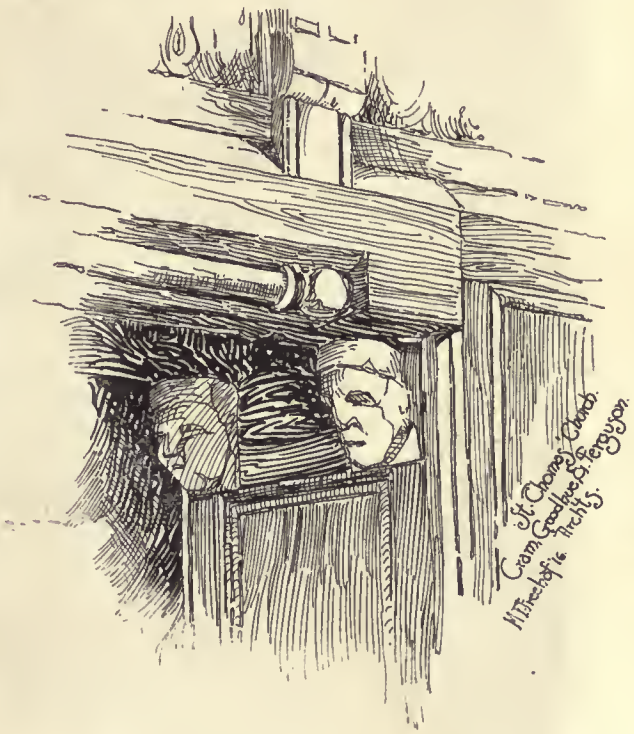
ALTERATIONS TO HOUSE OF EDWARD C. DELAFIELD, ESQ., RIVERDALE-ON-HUDSON, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

were only more common among the craftsmen of today.

The most valuable examples are, of course, to be found in the cathedrals. As we study choir stalls and rood screens, pulpits and railings possibly the first thing that impresses us is a certain element of fitness of handling. The designs

are often replicas of portions built of stone, yet even were the distinctive agency of color absent, the material could not be mistaken. The carving and joining are always done with strictest regard for the grain and greatest strength, and the remarkable state of preservation of most of the work attests to this. Then, too, the intimacy—the personal note and character of the artist is revealed in the delicate modelling, the interpretation of nature as he understood it. In the sainted figure one sees the superstitious note of the living for the dead—the conventional, non-human treatment of the exalted. The under-cutting, which is now done by machine, was then hand-carved, yet the shadows, the play of light and shade, always a true test of workmanship, reveal a skilled execution. The trefoil and the moulded arch are true, full curves and worked with a steady hand. Modern church work has in many cases preserved this sincere feeling, particularly in the Gothic style. Also, because of the better understanding of natural forms and the human figure, carvings are sometimes even more successful than past examples, and at least are more in keeping with present-day tastes.



The Chateau of France, the manor house of England, and the half-timbered house of both, give another phase of the true mastery of trade, the sign of the artist aiming to accomplish a masterpiece, rather than to get his work completed. The carved ceiling beams, the Elizabethan strap work and the Jacobean decoration remain in mute eloquence as monuments of the woodworker's art. The intricacies of design suggest a world of patience and a whole-souled interest which are rarely to be found in these days of commercial speed. The half-timbered

house has a separate interest, and in the working of beams and broad, plain surfaces, reveals the true craftsman. The exposed constructive members are usually admirably placed, and the carving on them, be it simple or elaborate, is done in a real decorative rather than an ornamental way. Columns and spindles really do support, brackets and grotesques have constructive lines and feeling, and even the so-called applied ornament is logically carved. It is objected, and with good reason, that many examples are overdone, but here again we must ignore the conception, and, granted the design, regard each detail for its execution only.

In the Renaissance we find the same care, but with a different aspect. The artisans seemed, in their work, to share the general re-awakening, the breaking away from the old confinements and the seeking after a new expression. The work itself appears to have caught the spirit as well as the design, and we find a treatment more free and less addicted to religious adherence to principle. The craftsmen carried on the competitive tendency of the master-builders, and vied with each other in the execution of their projects. Here we have a myriad examples, in screens, stalls, organ lofts, wall placques, cornices, balconies and what not.

In the Colonial period, too, we find a vast wealth of good material. The style is fundamentally a wooden one, and while the carpenter plays an important part, we still find the distinctive touch of the craftsman in cornices, doorways, Palladian motifs and interiors. There is no doubt of the absolute necessity of the architect's study of former styles and problems. It is always his dream if the realization is not practicable, to become intimate with them in their own environ-

A CAFE INTERIOR
MR. HOWARD GREENLY, *ARCHITECT*

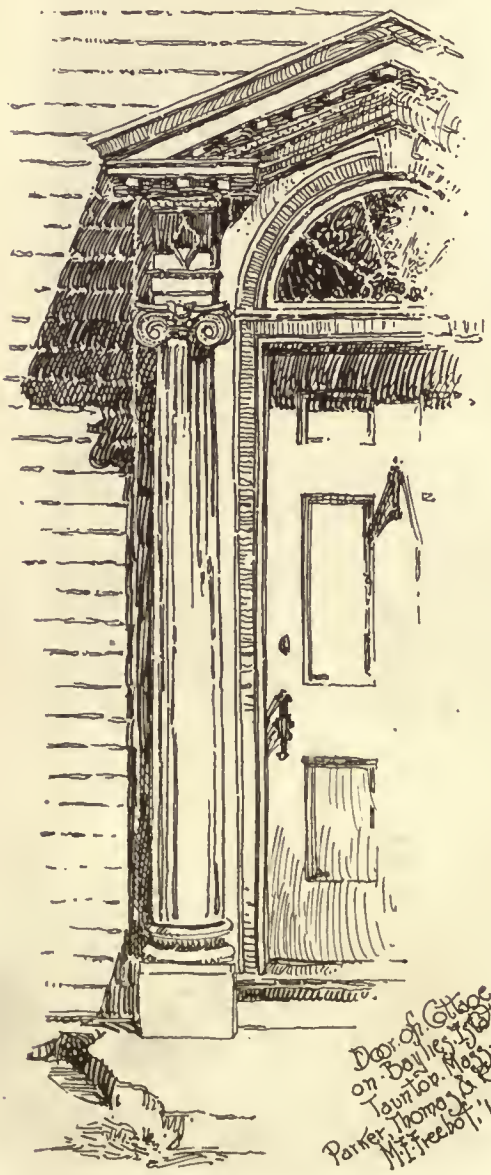
ment. Obviously, the modern craftsman as a wage earner, is not usually able to familiarize himself with the methods and execution of existing foreign work. However, it were a pity, indeed, if he did not examine constructively the material readily at hand as the architect does from the aesthetic angle. Even the exterior work is done with greatest attention to detail and technique, and the interiors are always a constant source of information. The architest has in many cases caught the true Colonial feeling, yet how often has he been betrayed by faulty handling. It is to be lamented that even the average layman can too easily distinguish the difference in spirit between the real Colonial and its modern adaptation. So many good examples have already been published that it is but idle repetition to mention them here. The artisan of the eastern states has only to take a short walk in his own town or its suburbs to discover suggestions in the expert handling of his fathers. The West seems to show more the spirit of earlier examples for here, again, we see the moving hand of the pioneer. The work is constructive and presents the same practical problems which had to be solved by the Colonial workman. The finished offering is not in itself more pleasing nor often so carefully done, but shows better the individual touch of a sympathetic understanding than the sometimes mechanical execution of the East.

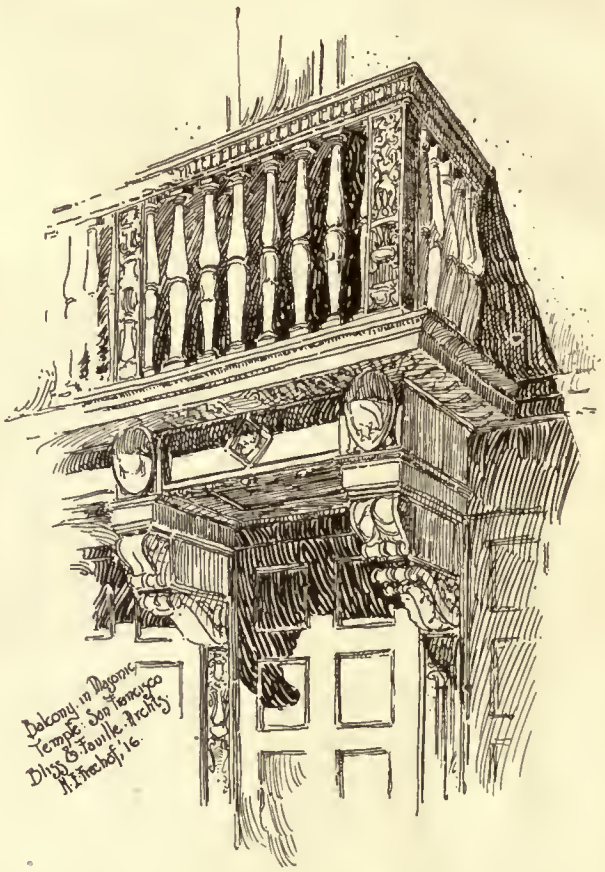
A LIVING-ROOM INTERIOR

MESSRS. LORD & HEWLETT, *ARCHITECTS*

This article does not aim to reflect on the ability of the modern craftsman. Owing to conditions today in a comparison with his predecessors, he cannot but suffer. However, the fact remains that in spite of the commercialized aspect of art and the mechanical means of production the results attained are very often excellent. Finished exterior woodwork is in general confined to doorways, cornices

and windows, and the effect of successful execution can often be obtained by the covering of paint. Nevertheless, there are undeniably a great many examples wherein carefully detailed and well-handled wood-craftsmanship is strikingly in evidence. The half-timbered house of today is so often a mere sham, that true constructive craftsmanship is almost impossible. There are, of course, some successful examples, but these are rather the exception than the rule. In comparatively few cases is the frank fitness of handling present, and good work in this quarter is rare. It is in the interiors that are to be found the real *chef-d'ouvres*. The modern tendency is toward a wood finish, even in many monumental rooms, and presents an extensive field for the craftsman. One of the most nearly perfected spheres is, perhaps, the laying of hardwood floors. This work permits of no mistakes and calls for the nicest feats of joinery and finish. Also, because of its location, it comes actually under the eye of the most casual observer and must put him into a frame of mind to receive propitiously the room itself. The trim, too, is an important feature. The variation of a shadow, the exposure of a nail hole, the opening of a mitre, all tend to cause the success of a happy design to be overborne by distasteful presentation. Often, naturally, the fault is one of settling, or condition of material, and in this monetary age the artisan is limited by difficulties which he may be unable to overcome. These are the things, however, which he must do his best to minimize, and in so doing, show the extent of his cleverness and practical ability. This is especially so where the natural wood finish is exposed, and many beautifully





executed interiors bear witness to great success in such handling. Elaboration often covers a multitude of sins. The working of frank, broad, undecorated surfaces is usually the greatest test of craftsmanship. In this connection may be mentioned ceiling beams. It is seldom in these days, except perhaps in churches, that true beams are used. The effect of a ceiling is too often destroyed by the opening of joints, poor finish, and the lack of that wholesome, constructive feeling which is the charm of former work. Architects are wont to recognize the decorative value of paneling, and it is essential, especially where a simple treatment is used, that the workmanship be fine. A broad wall space, broken up by large, moulded panels or sinkages, will allow of no perceptible variance of shadow, no untrue lines, and no imperfectly worked surfaces. Paneling lends itself readily to

all the styles, and the great amount of opportunity for experience has resulted in many very successful productions. Mouldings, whether carved or plain, are easily misrepresented, and their intended character lost, by the least departure from their true proportion, by the very suggestion of a careless return. In the use of composition ornament, which, unfortunately, is so much employed to supplant carving, the end should at least justify the means. There is nothing so detracting from a well-designed cornice as the poor workmanship attached to an

artificial wood leaf, or egg and dart, which cries out as a unit not in bond and sympathy with the other members of the ensemble.

One of the most compelling and decorative features of a room is the fireplace, and the mantel inevitably receives close inspection. The careful study of former types has led to the production of some very fine designs, and on account of scale and position, an orthodox adherence to the architect's intention is absolutely essential to success. Too many modern mantels have been constructed as a mere combination of the elements and mouldings submitted by the designer, into a mechanical likeness, from which the soul seems wanting. The proportions may be exact, each moulding may be correct in itself, yet the delicacy of silhouette, the feeling of mouldings flowing—building up on one another—may be just enough

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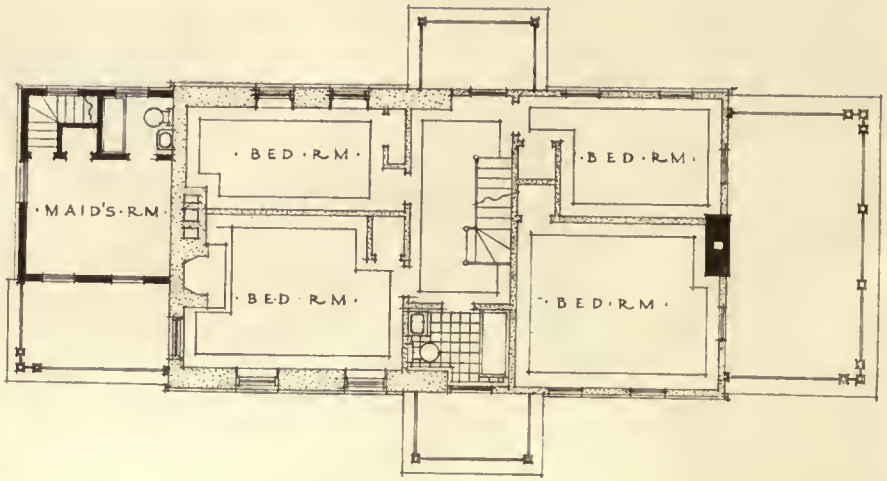

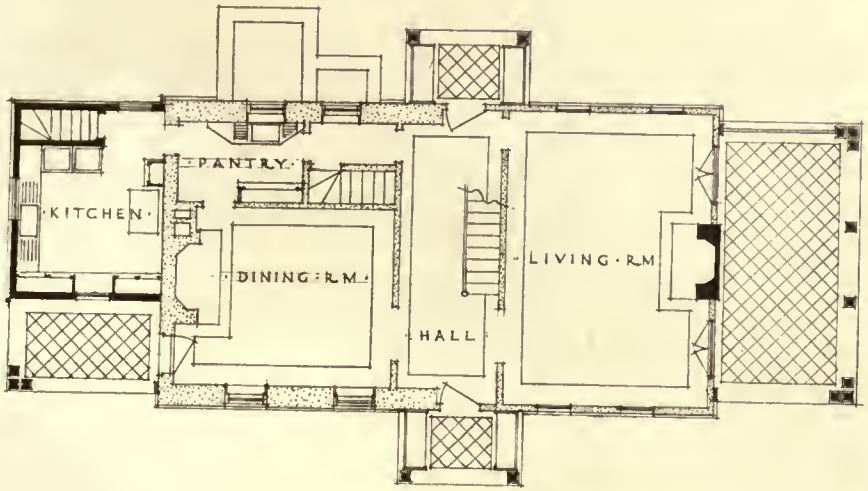

ALTERATIONS TO HOUSE OF W. R. SKILLMAN, ESQ., RIVERDALE, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

(See plate form for another view of this house)

HOUSE OF F. O. ZENKE, ESQ., RIVERDALE, N. Y.

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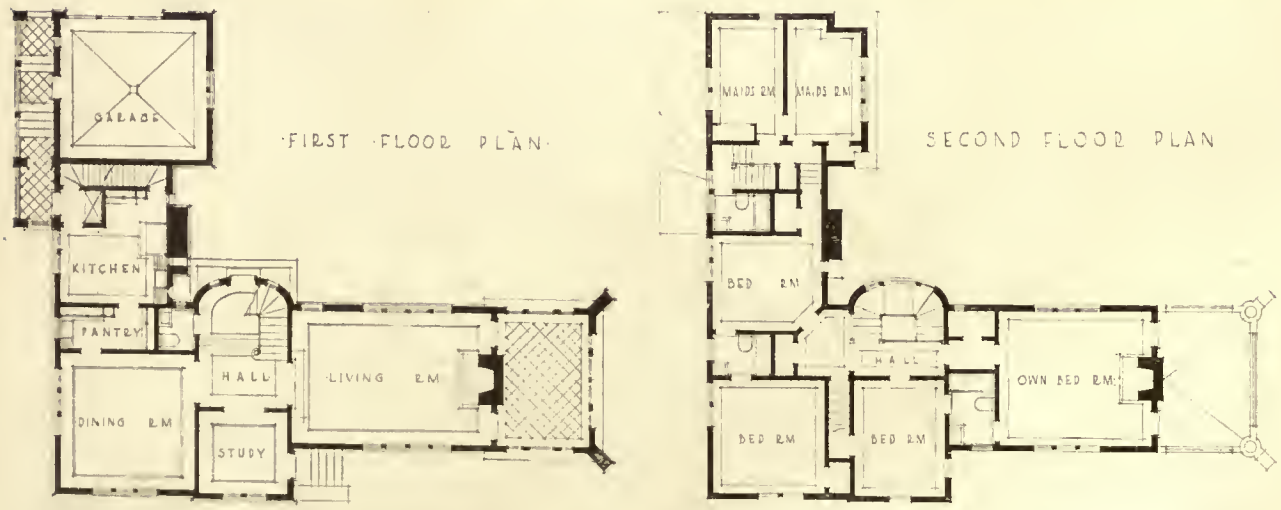
THE GARAGE



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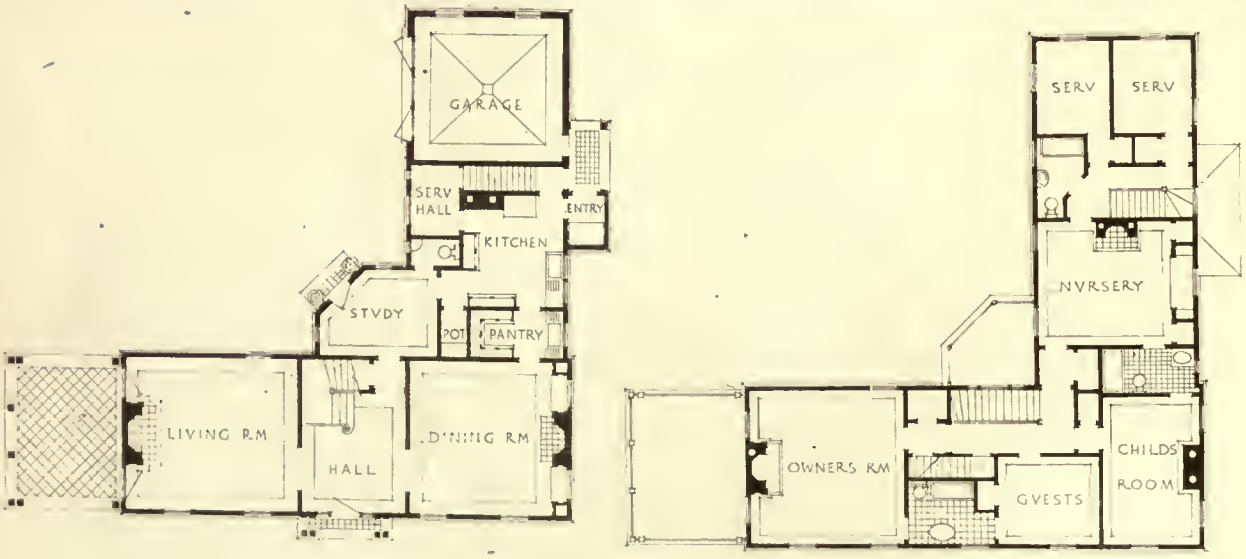

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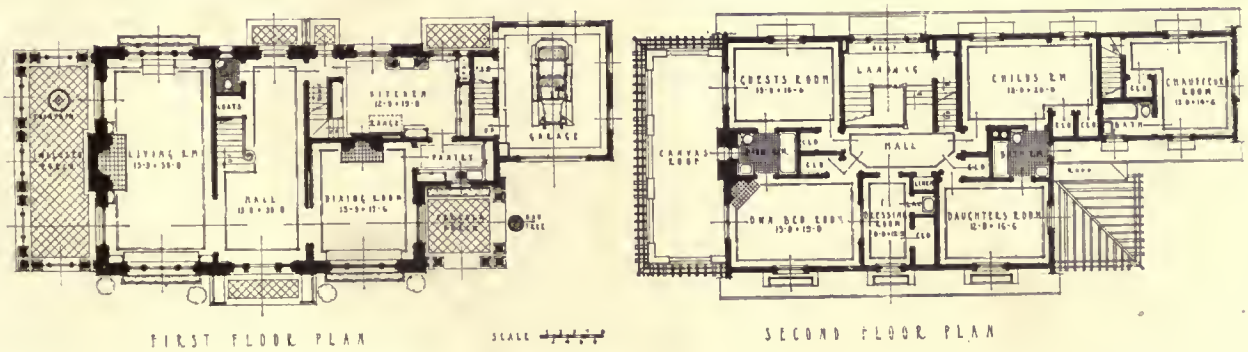

HOUSE OF DR. GEORGE A. WYETH, RIVERDALE, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

LIVING ROOM

HALL

A BEDROOM

HOUSE OF DR. GEORGE A. WYETH, RIVERDALE, N. Y.

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HOUSE OF J. J. HAMILTON, ESQ., RIVERDALE, N. Y.

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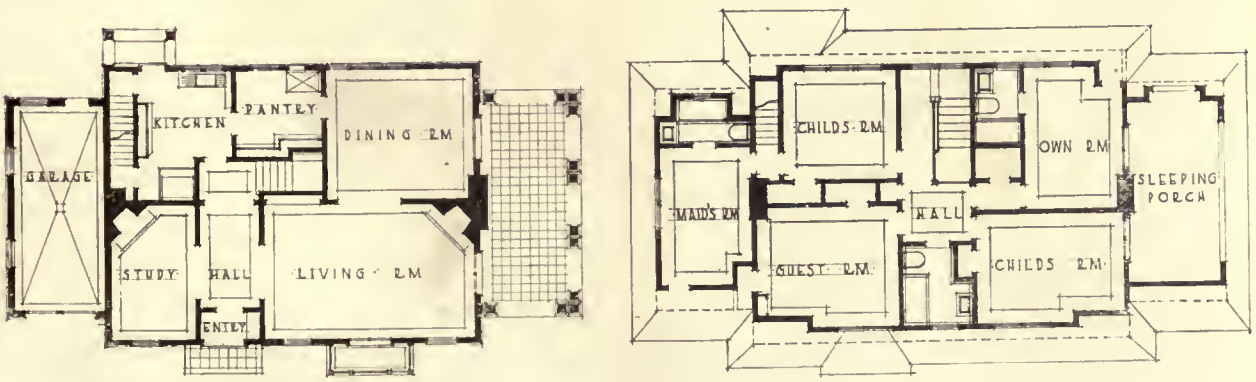
GARDEN FRONT



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(*For plans, etc., see page* 8)

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VOL. CXI JANUARY 3, 1917 No. 2141

NOTES AND COMMENTS ANENT SUBJECTS DISCUSSED AT THE RECENT A. I. A. CONVENTION

BY STATING in its report that unless due regard was paid to the subject of Quantity Surveying by architects, they might be placed in the position of having a new method of estimating forced upon them by contractors, the Committee on Contracts and Specifications sounded a timely warning. Unquestionably we have been rather complacent in our attitude toward a much needed reform. It is time some definite action was taken. For these, among other reasons, the committee states that the subject will receive further and very careful consideration. It would seem as though there was but one conclusion that could possibly result from an exhaustive study of estimating methods, and while changes are always productive of confusion and inconvenience, if they are necessary in the interest of progress, the sooner we face the fact the sooner we will be in position to go forward on the proper basis.

CONSTRUCTION of the Lincoln Highway—if this great thoroughfare is to be carried to successful completion—is of national importance, and it is to be hoped that the work will not be allowed to languish. The opportunities for misdirection afforded political interests in the control of this undertaking are so great that it will be only by the most watchful attention on the part of Institute Chapters everywhere that the artistic features of the highway will be conserved. Judging from action already taken or determined upon we may safely rely on such attention being forthcoming.

THERE is much talk now as to the duty of Congress to improve and conserve our national architecture, and the suggestion is strong that failure to do so is due to political rather than business reasons. While it is customary, and apparently popular, to blame our legislators for any condition not to our liking, the fact remains that the present situation is, in a measure, due to years of apparent apathy on the part of the profession. The public can control these matters, if sufficiently aroused, and unquestionably the responsibility for arousing it rests largely upon architects who alone can be expected to understand and appreciate the gravity of the abuses against architecture that have been committeed in the guise of governmental regulation within the past half dozen years.

PROBABLY no organization ever possessed headquarters more appropriate to its uses than The Octagon at Washington is to those of the Institute. Architecturally and historically the property is one in which not only the members of the Institute, but every man in the profession, and every other patriotic citizen may well take pride. Its preservation becomes, in a measure, a patriotic duty. For this reason, some national movement including the entire profession at least might with propriety—if the financial burden incident to its preservation and care proves too great to be met by present Institute income—be set afoot by non-institute members, perhaps, to collect a fund that will care for this structure for all time to come.

IT IS encouraging to note that the Committee on Allied Arts has availed of the suggestions made at earlier conventions, and that as a result there will be in future a more systematic effort made to develop the art of the craftsman. Inability to secure proper execution of architectural designs and details has been a very deterrent factor in architectural development in this country since early Colonial times. In many instances we have even been compelled to bring artisans and craftsmen from abroad to execute our work.

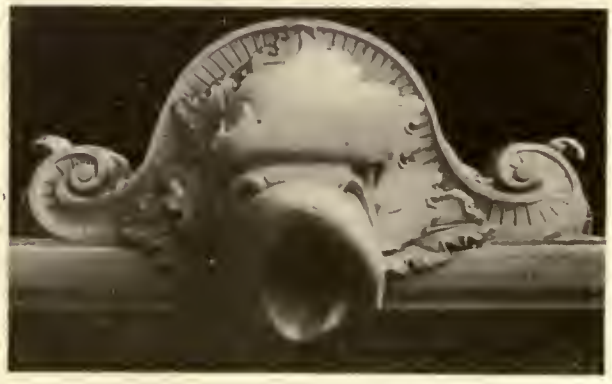
It might be said, however, that the progress of good craftsmanship in building is dependent almost entirely upon the influence and encouragement of architects, and here again the architect may be somewhat at fault for the existing conditions. The work of the Committee on Allied Arts appears of great importance in this connection, and it is to be hoped that in future there will be even greater co-operation with the craftsman than there has been in the past. The plan of giving his work representation in exhibitions is a step in the right direction, and it could be followed with advantage by others of a similar character all based on the now generally recognized fact of the close relationship between architecture and craftsmanship.

PERHAPS one of the most interesting paragraphs of the report of the Committee on Institute Publications is that devoted to the announcement of the new Structural Service Department to be begun by the *Journal* during the present month. It is admitted that the undertaking "is almost terrifying, so complex and laborious is the work connected with the useful presentation of the information which is to be classified and related in this department."

While the amount of effort and technical knowledge required to properly and intelligently classify, co-ordinate and arrange the information it is proposed to present, is great, it would appear after all that this is to be given on the authority of others and that little or no original research is contemplated. If this interpretation of the plan is correct it seems that the work to be done is largely statistical and routine in character.

It is noted in this report that "there are things which the *Journal* must do because it represents the Institute. It must turn its hand to furrows which would otherwise be neglected, though there be little financial profit to be derived from ploughing such fields—even though there be an apparent financial loss."

Evidently the establishment of the proposed Structural Service Department is not, however, regarded as constituting one of the unprofitable fields referred to, as it is stated: "The Committee has reason to believe that reputable manufacturers and producers of building materials throughout the country will welcome such a department and such a service, and that the *Journal* may confidently look forward to an income which will cover the heavy expense involved."



HOUSE OF F. O. ZENKE, ESQ., RIVERALE, N. Y.
MR. DWIGHT JAMES BAUM, *ARCHITECT*

CRAFTSMAN IN ARCHITECTURAL WOODWORK

(*Continued from page 7*)

out of handling to have lost, entirely, the spirit of the original intention. A mantel is usually a picture, a decorative unit, a jewel set in its surroundings. It bears the same relation to a room that a doorway does to a building, a carved moulding to an entablature. It must be modeled with a definite understanding and feeling, in order to be the material expression of the designer's thought.

Perhaps nothing is so much the mark of a good craftsman as a successful staircase. Much has been written concerning the difficulty of obtaining a comfortable run, and a really useful hand-rail. With the architect rests largely the solution of the relation of rise and tread, and of the best size and curve of the rail. Nevertheless, many an architect, following good precedent and experience, has designed a staircase that should logically have been a success, only to be sadly enlightened on later ascending it, and to find it far from what he intended. The human foot is a very sensitive member. It detects the slightest variance in a rise where the eye cannot, and a run that is really comfortable is a thing to be extolled. Usually, the stair-builder first sets up the work in his shop. When it arrives at the building, it is calculated to suit ideal conditions, the exact measurements of the architect's plans. Now, it may not be too comprehensive a statement to say that there has scarcely ever been a structure built which did not vary in some degree from the figures on the plan. This may or may not be the carpenter's fault, but whatever the reason, the fact remains. When the stair-builder starts to set up his work in its permanent position, he has, of course, these unforeseen differences to overcome, and here is the big difficulty, the solution of which tries his powers. Forming the handrail is in itself an art. A natural curve which lends itself to the hand without contradicting the run, and its final, graceful termination in the newel, not to mention the harmonious blending of all parts, and a happy combination with the execution of the other woodwork—all these problems form the obstacles with which the craftsman has to contend. Still another consideration is the baluster. These usually form an important feature in a decorative composition, and faulty execution is very noticeable. While it is true that there may be strength in numbers, and slight variances and mistakes appear lost in so many similar units, nevertheless the balusters are designed to play that very part of a repeated element, and the eye refuses to be coaxed into seeing what it does not. The layman cannot tell why a stairway appeals to him, or why it is tiring to climb; but show him a successful run and a poor one similar in general design, and he will easily be able to distinguish between them.

There are a great many more features of woodwork that might be mentioned here. Each has its own particular difficulty, its own separate pitfalls, and its own method of execution. There are pilasters, columns, built-in furniture, balconies, flower boxes, doors, blinds, and countless others. There are specialists who make a practice of the construction and finish of each separate group, but the same general laws apply to all. The capable architect has been trained through years of study and experience to create and combine. He prepares drawings representing certain ideas, certain conceptions, developed to the last stage as the best possible solutions, according to his own lights. From these the craftsman works, and he must try to present to the public what the drawing represents to the draughtsman. He must catch the spirit and original intention of the designer, and if he can give to it that individual, that personal touch which characterized the artist of the past, he will have contributed an additional note of charm. He is the interpreter. If he can translate to the public the actual text and spirit of the architect's message, without losing a single word or gesture, he will have successfully fulfilled his function as a craftsman.

Better City Planning for Bridgeport

The architectural profession has followed with interest the growth of Bridgeport, Connecticut, largely due to the munition business of the present war. One of the effects of the resulting boom—or rather of the failure of the city to provide for the resulting growth—is vividly illustrated by the following passage from the introduction to Bridgeport's City Planning Report, made jointly by John Nolen and Frank B. Williams, just issued:

"A laborer at one of the manufacturing plants in Bridgeport earned $12 a week, which, with steady employment, careful planning, and without emergency demands, had been sufficient to meet the needs of himself, his wife and three small children. The family occupied modest but reasonably comfortable quarters at a rent of $9.50 per month. Recently the landlord notified him that his rent would be raised to $12. The next day his wife set out to look for new lodgings. She sought in vain. The town was filled up. No quarters the family could afford were to be found. The landlord ordered them to move, and finally the sheriff turned them out—children, goods and chattels—into the street. He earned the prevailing rate of wages for unskilled labor. Their situation was brought to the attention of the Department of Charities, and its agents set out to find the family a home. No place they could afford to rent was to be had, and the wife and three children had to go to the city almshouse.

"This situation is not unique. On November 10, 1916, the day of inquiry, nine families were at the almshouse, having been ejected from their homes because of increased rents which they were unable to pay."

Bridgeport has now begun to see and remedy her lack of moderate priced houses. Mr. Nolen, the author of the first division of this report, issued not long ago a pamphlet entitled, "More Houses for Bridgeport," and that shortly afterwards a $1,000,000 corporation was organized to build them. This is, after all, however, an attack on what is only one phase of a single big problem—that of proper and adequate city construction as a whole. The building of houses and nothing more is a mere palliative. The only cure is in the increase also, along right lines, of all the municipal facilities —streets, sewers, parks, etc.; a wise regulation of all future building; and a change, so far as absolutely necessary, in the framework of the old city so as to remove the most hampering of its faults and limitations due to its construction, such as the narrowness of some of its main thoroughfares, the congestion of its business center, etc. *This* is city planning; and fundamental city planning is perhaps the one thing that cities are slowest to see the need of and *do*.

The preparation of the present report shows that Bridgeport has begun to face these more fundamental city planning difficulties which beset her. The following passage from the introduction to the second or legal part of the report, by Mr. Williams, indicates its necessity, its purpose and its scope:

"In order better to meet this exigency, Bridgeport has caused a survey of her situation to be made. The reports of Mr. Nolen and myself, now submitted, state the results of that survey, with recommendations, based on it, for the improvement of that situation. Mr. Nolen's report is occupied with the physical aspects of the subject, while mine is concerned with its no less important legal aspects. In a democracy like ours, no public enterprise can be accomplished except by methods sanctioned by law. A failure to know and appreciate this fact is one of the common causes of the failure of city planning effort in this country to produce practical results. Many a city plan remains merely a plan because of failure to make the legal methods of carrying it out an integral part of it. It is this legal part of the recommendations that is now to be considered.

This report will first take up the legal problems with regard to the planning of that part of Bridgeport and its environs which is at present within the legal limits of the city. In so doing it will deal first with the question of the city planning agency or executive for the city, its mem-

bership and powers; secondly, with various specific legal powers which the city needs in its planning as follows: the adoption of a city plan; excess condemnation; building regulation and districting; thirdly, with the financing of Bridgeport's city planning; lastly, with the planning of greater Bridgeport, so intimately connected with the problems involved in the planning of the present city.

The legal proposals of this report are all urged as more or less specific aids in carrying out the suggestions contained in Mr. Nolen's report for the improvement of the physical situation in Bridgeport. But this is not their sole purpose. It is hoped that the measures advocated in this report are also those legal measures of which in her planning Bridgeport is most in permanent need.

Book Note

PARKS, THEIR DESIGN, EQUIPMENT AND USE, by George Burnap, Landscape Architect of Public Buildings, Washington, D. C. Full cloth, 310 pp., size 7 x 9½ inches, price $6.00. Philadelphia and London: J. B. Lippincott Co.

This book is announced as the first of a series of four, under the authorship of Mr. Burnap, who is widely known among landscape architects for his work at Washington.

While it has been evidently prepared for landscape architects and those in charge of public parks, it will be found of considerable value to every one who is interested in the planning and growth of the larger forms of gardens and recreation centers.

Much originality has been shown in the preparation of the text, and the large number of illustrations that completely fill every other page give definiteness to the work. Parks all over the world are illustrated, and the dominant characteristics, good or bad, are pointed out in briefly written comment.

As parks form such important parts of modern city planning, and as their general arrangement and planting may either become a source of gratification or regret to a community, depending upon the degree of skill employed, an authoritative work similar to this has great value in pointing out the things that may be incorporated or should be avoided.

This book is divided into fifteen chapters. The first treats of "Park Design in City Planning," and is followed by relative chapters on the principles of design, the care of parks and their architecture. A timely word of warning is spoken as to the placing of effigies and monuments in parks.

In no one particular, perhaps, has the work of the landscape gardener suffered more than in the well-meant but unfortunate selection and placing of monuments. A type of park, entertainingly discussed in this work—the "passing through" park—has suffered more than any other in this respect. Mr. Burnap's chapter on this subject should have careful consideration.

Here and There

Time and again, in that first of architectural magazines into which I have been dipping, the question of competitions crops up. Even in this present year of grace we hear complaints about the manner of conducting such affairs, as witness the competition for Australia's new Parliament House, but the evils which we know are nothing in comparison with what prevailed in the early part of the nineteenth century. Here, for example, is what "Hostis" says in *The Architectural Magazine* for January, 1835: "The undue means which are sometimes resorted to by competitors, to forward their own cause, are disgraceful in the extreme; some have been known openly to carry about their designs for the purpose of procuring votes before the general exhibition; some unfairly attach their names to their plans (instead of using a private mark, as they ought to do); and some have even been known, surreptitiously, to withdraw their design from the exhibition in order to add improvements which have been suggested by the designs of another; nay, such is the total want of principle, and disregard of justice to the competitors, shown in some cases, that an instance could be brought forward where

one of the competitors was appointed the judge! He, most naturally, gave his decision in favor of his own design; and the unsuccessful competitors were dismissed with the most cogent and satisfactory argument that 'the judge was a man of such respectability that he would not have chosen his own design unless, he had considered it the best!'" How truly Gilbertian! Yet we are assured that this was the way in which nine out of ten competitions were then conducted.—*Architects' and Builders' Journal.*

Commission on Building Heights

A report recently rendered by the Special Commission on the regulation of the height of buildings in Boston is now under consideration. The Commission, which is composed of Messrs. Ralph Adams Cram, of the City Planning Board; Patrick O'Hearn, Commissioner of the Building Department, and John Grady, Commissioner of the Fire Department, reported in favor of dividing the city into two districts—A and B. In the confines of District A, according to the recommendations, buildings may be erected to a height of 125 ft.; in District B, buildings are not to be erected over 80 ft. above grade.

The report of this Commission will take effect sixty days from the date of its filing, unless protest is made, and the court orders a delay so that matters in dispute may be reviewed.

Personal

Mr. Frederick Baird, architect and engineer, 942 Prospect Street, Cleveland, O., announces that he has retired from business and does not care to receive further circulars or catalogs.

Messrs. James E. Blackwell and F. L. Baker, who for many years practised architecture under the firm name of Blackwell & Baker, Seattle, Wash., have dissolved partnership. Mr. Blackwell will continue practising in the present offices in the Northern Bank Building, while Mr. Baker will open a new office in the Hinckley Block.

Wood Now Colored in Its Green State

The use of colored woods in the construction of furniture has long been known. The material has usually been stained after the necessary seasoning process. Within the last few years, however, a method of Austrian origin has been employed whereby the wood is colored while in a green state. By means of a heavy pressure in a closed vessel the sap is driven out of the wood and is replaced by the coloring fluid, which may consist of a solution of the more permanent aniline dyes. The best kinds of wood for treatment are found to be birch, beech, alder, plane, elm, and lime.—*Decorative Furnisher.*

New Building Laws

The interest which is being manifested throughout the country in the revision of building codes is well exemplified in the recent formation of a plan for a general meeting of the associations interested in the welfare of the city of San Jose, Cal.

The purpose of the meeting is to devise plans for the preparation of a new code to regulate buildings within that city. The subject is one of general interest and the attention it is receiving only emphasizes the desirability of a national basic building code.

INDUSTRIAL INFORMATION

Marble Work

The Vermont Marble Company, Proctor, Vt., has issued a unique calendar for free distribution among architects. It consists of sheets of cardboard presenting, in addition to the calendar, views of the Proctor works and machinery. On the reverse side of each card is shown a beautifully printed half-tone cut, 6¼ x 9 inches in size, illustrating various architectural features executed in marble by this company from architects' plans, or buildings of architectural interest designed by leading architects of the country. The collection is one that architects will probably be glad to add to their library.

Sash Holders

The Weightless Window Sash Holder Company, Washington, Pa., has issued an interesting folder setting forth the merits of the Weightless Window Sash Holder. This consists of bowed springs holding roller ratchets to attach to each side of the sash. A sash equipped with these holders can be held at any desired position. It is claimed that it will prevent rattling, is easy to operate, and perfectly safe; that it will last a lifetime, saves lumber and labor; can be attached to old windows as well as new, and that by its use weights, side boxes, cords and pulleys are eliminated.

Copy of the folder can be had upon application.

Southern Beauty Enamel Ware

The Cahill Iron Works, Chattanooga, Tenn., have recently issued Catalog H, which illustrates and describes in some detail the enamel iron bath tubs, lavatories, kitchen sinks, drinking fountains, laundry trays, etc., manufactured by this concern.

Catalog H is the largest and most complete book ever issued by this company. It contains approximately 240 pages printed on heavy coated paper and substantially bound in boards. It is stated that the half tones are exact reproductions of the fixtures themselves set up for use. There have recently been added a number of tub patterns to the line formerly carried by this company, which makes it compare favorably with any other on the market. Roughing-in- measurements are not given in this catalog, but a booklet in which they are noted, for all fixtures illustrated, will be furnished upon request.

It is claimed that the material entering into the manufacture of these fixtures is the best that can be procured; that the equipment in all departments of the manufacturing plant is modern, and that Southern Beauty Enamel Ware has always been recognized as second to none. Each piece of this Ware bears a guarantee label.

J. M. Transite Asbestos Shingles

The H. W. Johns-Manville Company, with executive offices in New York City, has issued a new catalog, illustrating, what it is claimed, is the roofing material that comes nearest the ideal. It is stated that Johns-Manville Transite Asbestos shingles eliminate fire danger, are artistic in appearance, are practically indestructible since they will not rot, burn or rust, and that they perform all the duties of a real roof in every sense of the word.

The catalog contains sixteen pages of reproductions from half-tone cuts showing buildings which have been roofed with this material, ranging from the bungalow to the large public building. Specifications for applying these shingles are also included, and the various sizes and shapes suitable for different uses are shown.

Copy of the catalog may be had upon request.

PALAZZO STROZZI, FLORENCE, ITALY

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, JANUARY 10, 1917 NUMBER 2142

TYPICAL WARDS

ROBINSON MEMORIAL BUILDING

MASSACHUSETTS HOMEOPATHIC HOSPITAL, BOSTON, MASS.

KENDALL, TAYLOR & CO., *Architects*, 93 Federal St., Boston, Mass.

THIS building, completed and occupied quite recently, while referred to as the Maternity Building, really houses two divisions of this large institution, the Obstetrical and the Out-Patient Departments.

When work was started, the site was occupied by the old Out-Patient building, a one-story structure erected twenty years ago. Fortunately the walls and foundation were strong enough to carry the proposed five-story building. In the new building, the ground, first and second floors are used for the Out-Patient Department. A separate entrance is provided for this department on Harrison Avenue, leading to the first floor, with elevator service to the second floor, and, in addition, there is a broad staircase leading up from a point back of the registry or control station, opposite the entrance. Rooms for treatment of women, children, eye, and also surgical, genito-urinary, and neurological cases are provided on the first floor. In a one-story wing over what was formerly the boiler room are the medical clinics, and in another wing the lecture room, used for clinical lectures, etc.

On the second floor is the orthopedic department, the ear, nose and throat, social service rooms and two double rooms

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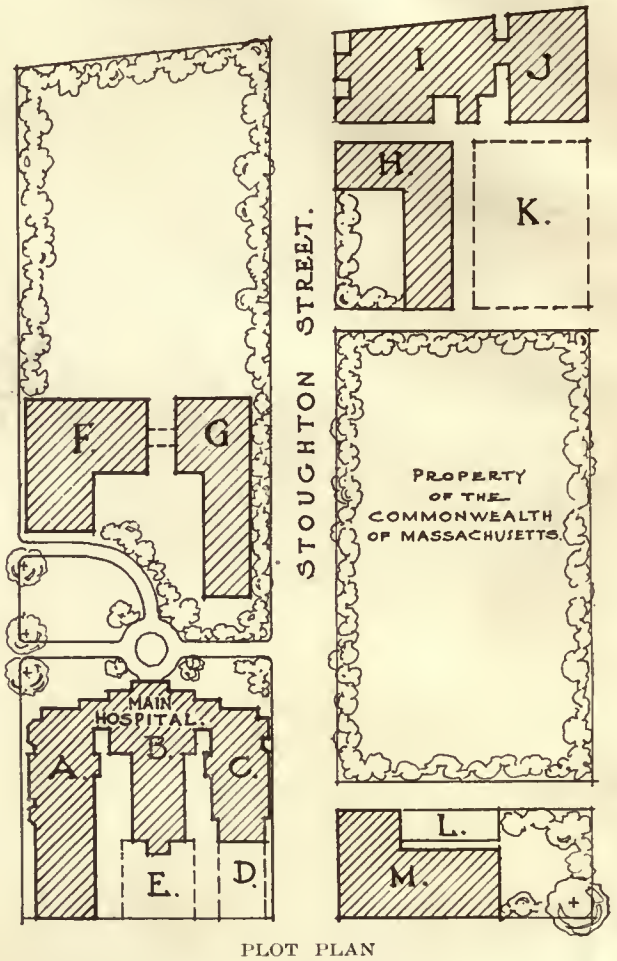
for externes, each with private bath. Out-patients from these two floors descend to the ground floor, on which are located toilets for men and women, and the pharmacy, thence out to Stoughton Street by an exit used for no other purpose, thus avoiding confusion in traffic during the busy hours of the clinics. Rooms for male employees of this building are provided on the ground floor, and also work shops, storage, etc. The balance is occupied in connection with the maternity department for ward patients' locker rooms, laboratory, toilets for visitors, sterilizer, etc.

The entrance to the maternity department is on the Stoughton Street side through a lobby and memorial waiting room. Access to the floors above is by means of an elevator or by a staircase. There is no direct communication on the first floor between the maternity and out-patient departments, and on the second floor only as a matter of convenience for employees. The prenatal clinic is on the second floor, with dressing rooms and waiting room adjoining. Two rooms for internes are also provided on this floor.

The third floor is known as the public ward floor, and has two 10-bed and two 8-bed wards and two isolating rooms for twilight, septic, or other cases. Delivery and labor rooms are as far removed from the wards as possible and shut off with double doors. The labor room is equipped like the delivery room in every way, giving ample capacity in an emergency. There are two toilet rooms for patients, in one of which is a special cubicle for exclusive use of nurses. There are two nurseries, with room for bathing, in the south corner, with a balcony for airing. The nurses' station controls the entire floor, and is easily accessible to diet kitchen, utility, or linen room.

The fourth floor is the semi-private floor, and has four 2-bed and three 8-bed wards, and is identical with the floor below in all other respects. There is an incubator located in the corner nursery on this floor.

The fifth floor, which is the private patient floor, has twelve rooms, eight arranged en suite, with baths, permitting a flexible arrangement for renting with or without bath rooms. The nursery and bathing rooms are smaller on this floor, and adjoining the diet kitchen is a special kitchen or laboratory for preparation of milk for the entire maternity department. A large sterilizing room is provided on this floor, which contains water stills for the purpose of supplying



PLOT PLAN

ROBINSON MEMORIAL, MASS. HOMEOPATHIC HOSPITAL, MARKED I

distilled water to all portions of the building where required. There are special reheating devices for distilled water in the delivery rooms below. There is also a room for obstetricians, with lockers and shower. The roof is arranged as a garden, protected by awnings, for the use of ward patients.

The exterior of the building is of waterstruck brick, with limestone trimmings. The solarium is of copper; on

the front, at the fifth floor, the wall is set back 8 feet, forming an airing balcony for the private patients. The floor of the balcony and of the garden on the main roof are of tile. The building, with the exception of doors and trim, is as fireproof as it can be made, and every room on the ground floor has automatic sprinkler equipment. The interior finish, with the exception of the lobby and waiting

SOLARIUM ON FIFTH FLOOR

room at maternity entrance, is plain, the effort being to secure simplicity, permanence, and utility. The general color is a soft gray green. The lobby and waiting room walls are of white English vein marble, the base and border of verde antique, and the floors of gray Tennessee marble. The walls above the dado are in plaster, painted a warm French gray, with simple decorations.

The floors in the out-patient corridors, the nurses' rooms, and the diet kitchen are of red tile. The walls of the diet kitchen and nurses' rooms are faced with the same material 7 feet high. White marble mosaic floors are used in the delivery and labor rooms, with gray Tennessee marble wainscoting. Linoleum is used in third, fourth and fifth floor corridors, the private rooms on the fifth floor, and in the internes' and externes' rooms, with terrazzo bases 6 inches high on walls and 8 inches wide on the floors. Terrazzo floors are used elsewhere, and in large wards these were divided into panels by the introduction of strips of black marble mosaic to break up the rather monotonous appearance of the material.

The corridor walls are light buff, with a darker tone below 4 ft. high; the nurses' rooms and diet kitchens are buff above the tile; the wards and patients' rooms are light green above a darker green dado; a light gray was used in the delivery room,

DIET KITCHEN

nurseries, rooms in the out-patient department, toilets, etc.

The steam for heating and electricity is generated at the central plant and transmitted in underground conduit to the building. Heating generally is by direct radiators, with fresh air taken directly from out of doors through the windows. After nine months of operation—mostly to capacity—we find no reasons for regretting this simple and direct method of ventilation. Air is exhausted by fans from all toilet rooms and from nurses' workrooms and diet kitchens by a separate system. All wards are cross ventilated, with sash in the corridor walls. The sash is placed and used like transoms and also serves to add light to the corridors.

Hot water is obtained from a storage tank in the ground floor, heated by high pressure steam from the central plant. The circulation is arranged so that hot water is obtained instantly at any point. Lavatories are provided in each room or ward except in the fifth floor, where there are communicating bathrooms. All lavatories have special valves which can be operated manually or by the elbow.

Refrigeration is provided by a small machine in the basement, cooling drinking water as well as ice boxes. Food is cooked in the kitchen of the main hospital and brought to the building by auto truck in insulated containers. Special cooking for private patients can be done in the fifth floor kitchen. Waste and garbage are consumed by incinerators located in each nurses' workroom. The nurses' and internes' calling system is of the latest pattern, and all private rooms are provided with telephone jacks.

The lighting fixtures are of special design, with consideration for the specific uses of each group of rooms; semi-direct fixtures, with a glass diffusing bowl and clear glass dome, are used in all patients' rooms and wards, and direct fixtures in all rooms other than those occupied by patients. All patients have bedside lights at head of bed. The delivery and labor rooms are lighted by means of four

NURSES' WORKROOM

pendant lights, with a lower glass diffusing bowl and glass dust cover, with an adjustable deflecting shade, permitting regulation of light on the sphere of operation.

WAITING ROOM, MATERNITY DEPARTMENT

The flower bay in the nurses' room is a new departure and permits of the watering and care of flowers when required; the inner and the outer sash can be adjusted to regulate the temperature.

A great deal of study was given to the plans prior to starting the work, in order to have the scheme as complete as possible, but, even then, some minor alterations were found desirable before completion.

The cost, owing to variations in methods of cubing used in various offices, may not be interesting for comparison, nor is the cost per bed especially valuable; the building was added on top of the foundations and first story of an existing building. In order, therefore, to arrive at an approximate valuation of the building, the old work was appraised and is included in the cost stated below:

Construction	$219,018
Mechanical equipment	53,982
A total of	$273,000

Cube foot contents, 616,760 feet.

A cost per foot of 0.443.

The percentages of cost of the several items may be of interest. They are:

Erection	80.23
Heating and ventilation	6.79
Electric work	3.01
Electric fixtures	.926
Plumbing	6.075
Refrigerators	.028
Elevators	2.004

THE CURRENT ARCHITECTURAL PRESS

MR. GEORGE B. FORD, in an article in the December issue of *The Architectural Review*, describes the park system of Kansas City, and "The working out of an adequate system of parks and boulevards, playgrounds and play fields, as a civic enterprise, that architects and landscape

(*FROM ARCHITECTURE*)

TELEPHONE AND TELEGRAPH BUILDING, NEW YORK

WM. WELLES BOSWORTH, *ARCHITECT*

architects are peculiarly fitted to inspire and to lead." In the opinion of Mr. Ford there can be no dissent from this view.

It may be truthfully stated that in this country architects have too long been principally concerned with building proper and have neglected town planning and kindred subjects. That they are now beginning to realize the true importance of the hitherto neglected features of their work is shown by the rapid development in town planning during recent years. Mr. Ford's article is of much interest and value.

The field of our early Colonial architecture has been so thoroughly explored that many contributors to magazines are turning to a later period and endeavoring to find in what they term "Post Colonial times" or the beginning of the nineteenth century, some examples of sufficient architectural interest to warrant description and illustration.

Mr. Edwin Bonta has made an architectural journey "along the Seneca turnpike" and in this issue sets down a record of what he saw. His article is illustrated with many pictures. A transitional period of architecture is shown and not always satisfactorily in its combination of early traditions with a certain effort toward originality. Yet these examples have historical interest and for this reason the article possesses a certain value.

Richard Franz Bach's series on Church Planning in the United States is advanced to its fifth installment; W. G. Massarene writes on New Houses from Old Models, and Frederic Lees contributes an article, interestingly illustrated, on The Palace of Diocletian. The details of sub-

(*FROM THE BRICKBUILDER*)

POSTAL LIFE BUILDING, 43D STREET AND FIFTH AVENUE, NEW YORK, N. Y.

YORK & SAWYER, *ARCHITECTS*

jects illustrated in the portfolio of *Current Architecture* in this issue and elsewhere, will be found in our index on another page.

* * *

A number of interesting buildings of comparatively recent completion, constructed, of course, of burnt clay prod-

ucts, are shown in the *Brickbuilder* for November.

The most interesting architecturally is, perhaps, the Postal Life building on Fifth Avenue, New York, York & Sawyer, architects.

Other subjects are the Hampton Shops building, Rouse & Goldstone & Jos. L. Steinam, architects, country houses in Locust Valley, L. I., by Kenneth M. Murchison and in Bristol, Conn., by Murphy & Dana. Some brick apartment houses are also illustrated. Mr. Aymar Embury II closes his series describing the architectural development of New York "From Twenty-third Street Up." The illustrations are interesting.

If we are to have in this country a well-

(*FROM THE WESTERN ARCHITECT*)

CARTER H. HARRISON TECHNICAL HIGH SCHOOL, CHICAGO

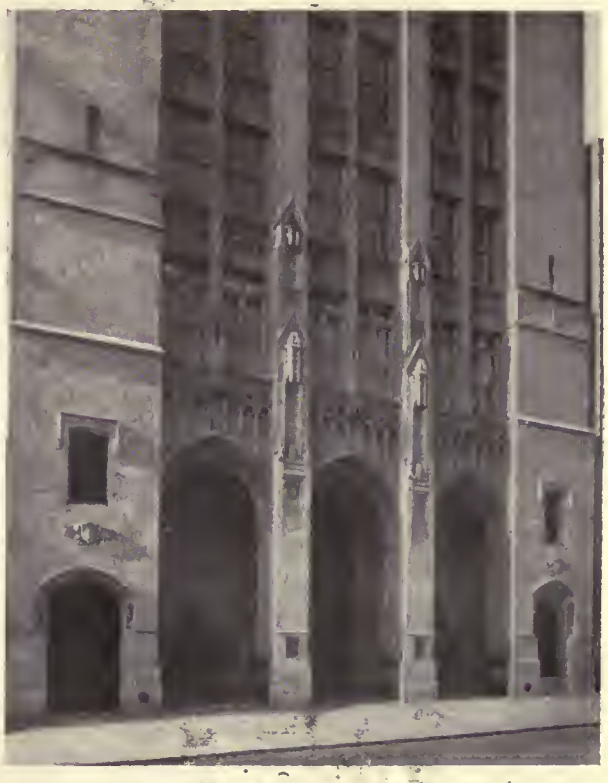
A. F. HUSSANDER, *ARCHITECT*

directed development of good craftsmanship, it will be through the incentive of such authoritatively written articles as that of Professor Hamlin on decorative plaster work. The classical examples to which Professor Hamlin directs attention, many of which are illustrated in his text, are such as to inspire our modern craftsman to an effort of similarly high achievement.

The Observations of a Draftsman, printed in this issue, smacks somewhat of that individual to be found in all large organizations who feels he is competent to advise his employers as to how they should conduct their business. The fact that the methods criticised are those of large and successful offices would seem to negative the force of the argument. Perhaps the idea is one of humor.

Architecture for December devotes considerable space to the illustration and description of The Telephone and Telegraph Building, Dey Street, New York, Mr. William Welles Bosworth, architect. It is interesting to note that this well designed building has received those principles of architectural refinement advanced by Professor William H. Goodyear and which have been very thoroughly discussed by him in the pages of THE

(*FROM THE BRICKBUILDER*)



DETAIL OF LOWER STORIES.
HAMPTON SHOPS BUILDING, EAST 50TH STREET, NEW YORK, N. Y.
W. L. ROUSE & L. A. GOLDSTONE & JOSEPH L. STEINAM, *ARCHITECTS.*

AMERICAN ARCHITECT. Mr. Bosworth has contributed an article descriptive of his building, and referring to the architectural style employed, states:

The columns of the bays are spaced so that the two bays nearest the center are wider than the two end bays. This produces a slight sense of curvature in the façade, further emphasized by an actual curvature of the skylines following the precepts of Professor William H. Goodyear of the Brooklyn Institute. A certain

vibration has been effected in this way. The square plinths under the columns have been rounded off and each order diminishes in diameter as the building rises, each order also being set back from

(FROM THE ARCHITECTURAL RECORD)

HOUSE OF FRANK KUHN, ESQ., DETROIT, MICH.
ALBERT KAHN, *ARCHITECT*

the one below it. There are three-story heights in the Ionic orders, the two upper stories being joined by metal spandrils, the lower one being separated by a solid base of masonry which gives rigidity to

(FROM THE INTERNATIONAL STUDIO)

A COLONNADE AT THE OLD PALACE AT GREENWICH
BY WM. B. E. RANKEN

the columns. The offices within are abundantly lighted and the positions of the windows in relation to the interiors are practical and agreeable. The columns projecting beyond the wall surface do not obstruct the view or the light.

As this is perhaps the most important structure of recent erection to receive the treatment described it will afford an excellent opportunity to observe and study the effect produced. It will require a personal inspection, as photographs cannot be taken from the narrow streets that surround the building that will satisfactorily show what has been accomplished.

Mr. Edgerton Swartout's series on The Classic Orders of Architecture

(FROM THE ARCHITECTURAL RECORD)

EXTERIOR
RESIDENCE OF MRS. R. S. McCORMICK, WASHINGTON, D. C.
JOHN RUSSELL POPE, *ARCHITECT*

reaches its third installment and in this issue treats of the Doric Order.

* * *

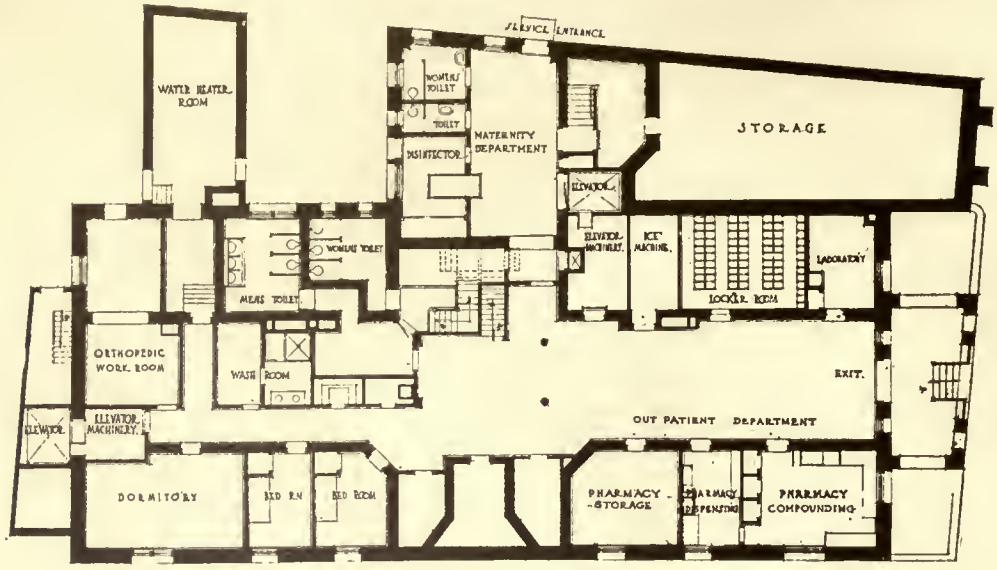
The International Studio for December contains a somewhat apologetic article on Modern Art. In an introductory remark the editor states that "so many galleries are exhibiting modern art that every reflecting person must be convinced that there is something in it, in spite of the

(*Continued on page* 27)

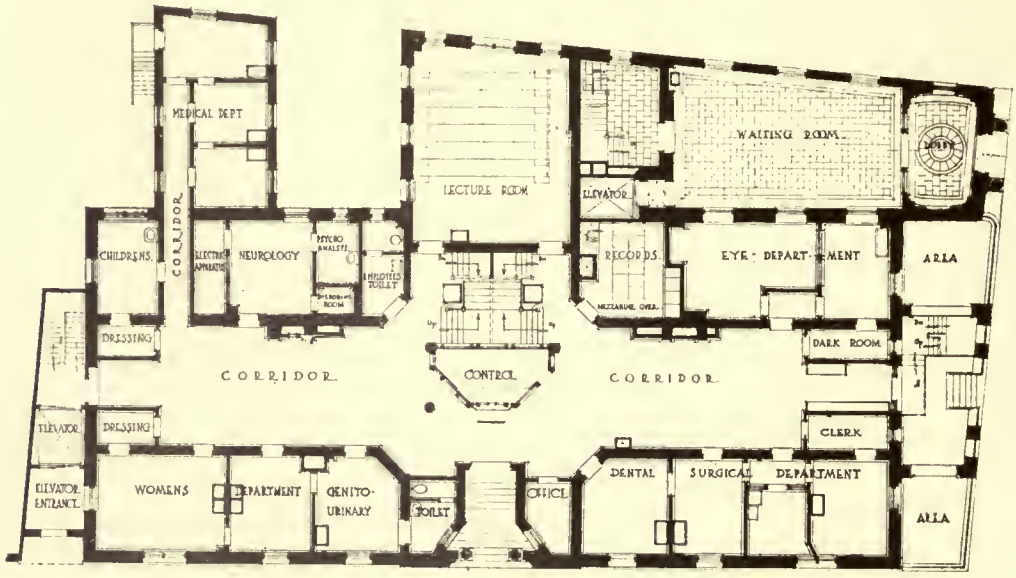
ROBINSON MEMORIAL BUILDING

MASSACHUSETTS HOMEOPATHIC HOSPITAL, BOSTON, MASS.

MESSRS. KENDALL, TAYLOR & CO., *ARCHITECTS*



GROUND FLOOR PLAN



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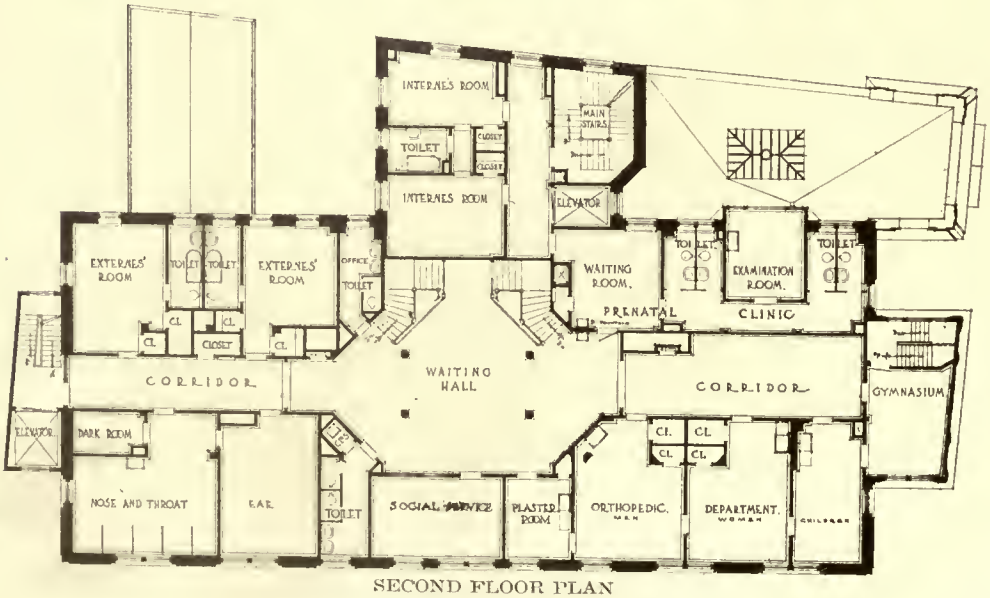

SECOND FLOOR PLAN

ROBINSON MEMORIAL BUILDING
MASSACHUSETTS HOMEOPATHIC HOSPITAL, BOSTON, MASS.

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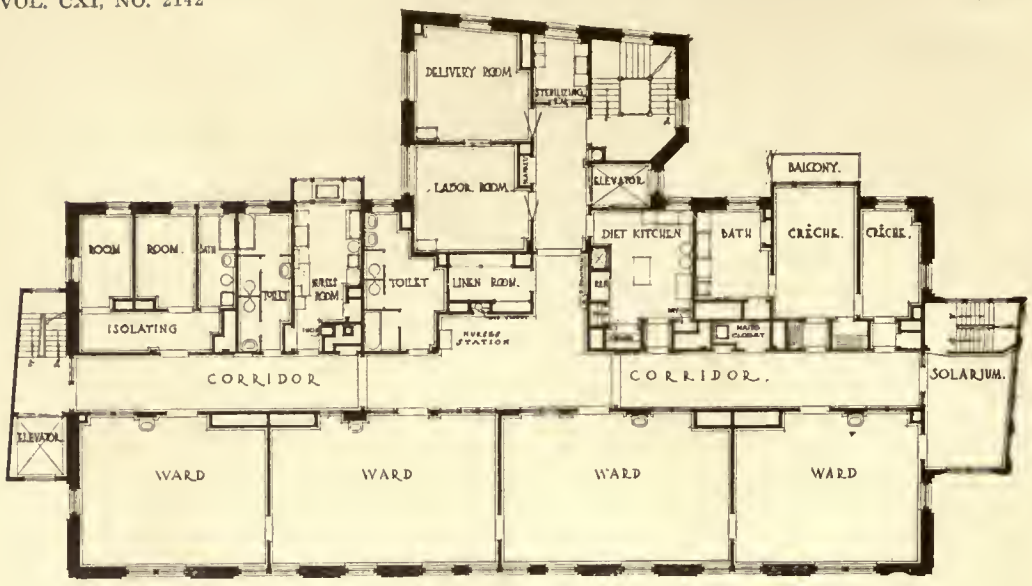

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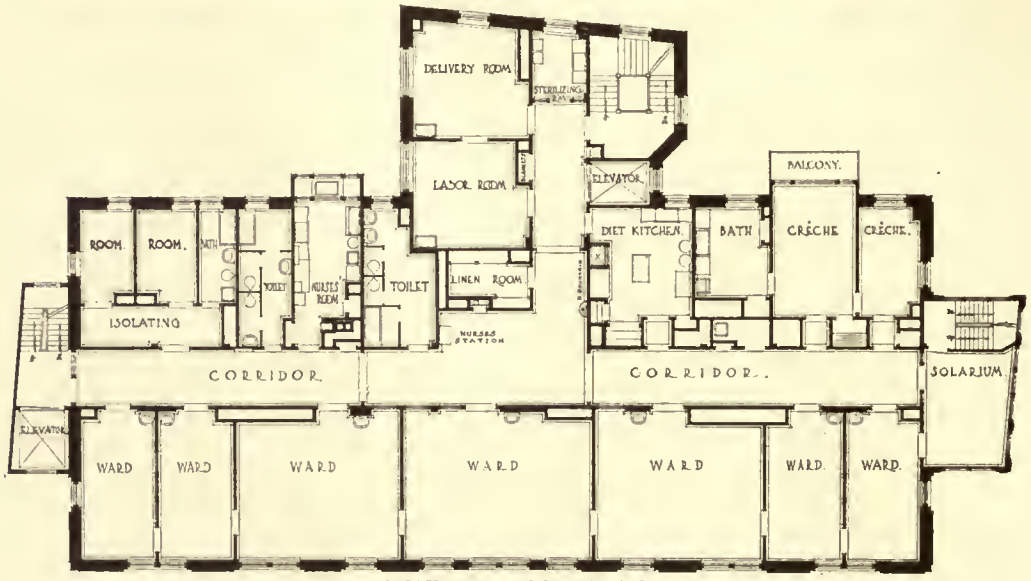
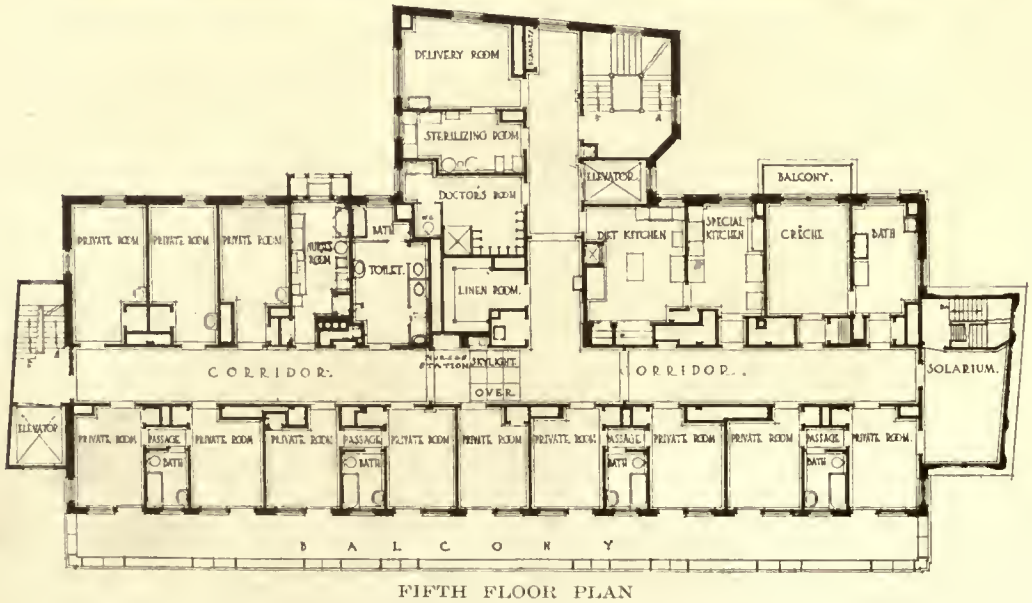


FOURTH FLOOR PLAN



FIFTH FLOOR PLAN

ROBINSON MEMORIAL BUILDING
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ENTRANCE TO MATERNITY DEPARTMENT

ROBINSON MEMORIAL BUILDING
MASSACHUSETTS HOMEOPATHIC HOSPITAL, BOSTON, MASS.

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A PRIVATE ROOM

DELIVERY ROOM

ROBINSON MEMORIAL BUILDING
MASSACHUSETTS HOMEOPATHIC HOSPITAL, BOSTON, MASS.

MESSRS. KENDALL, TAYLOR & CO., *ARCHITECTS*

NURSES' WORKROOM, SHOWING PLANT BAY

A CORRIDOR

ROBINSON MEMORIAL BUILDING
MASSACHUSETTS HOMEOPATHIC HOSPITAL
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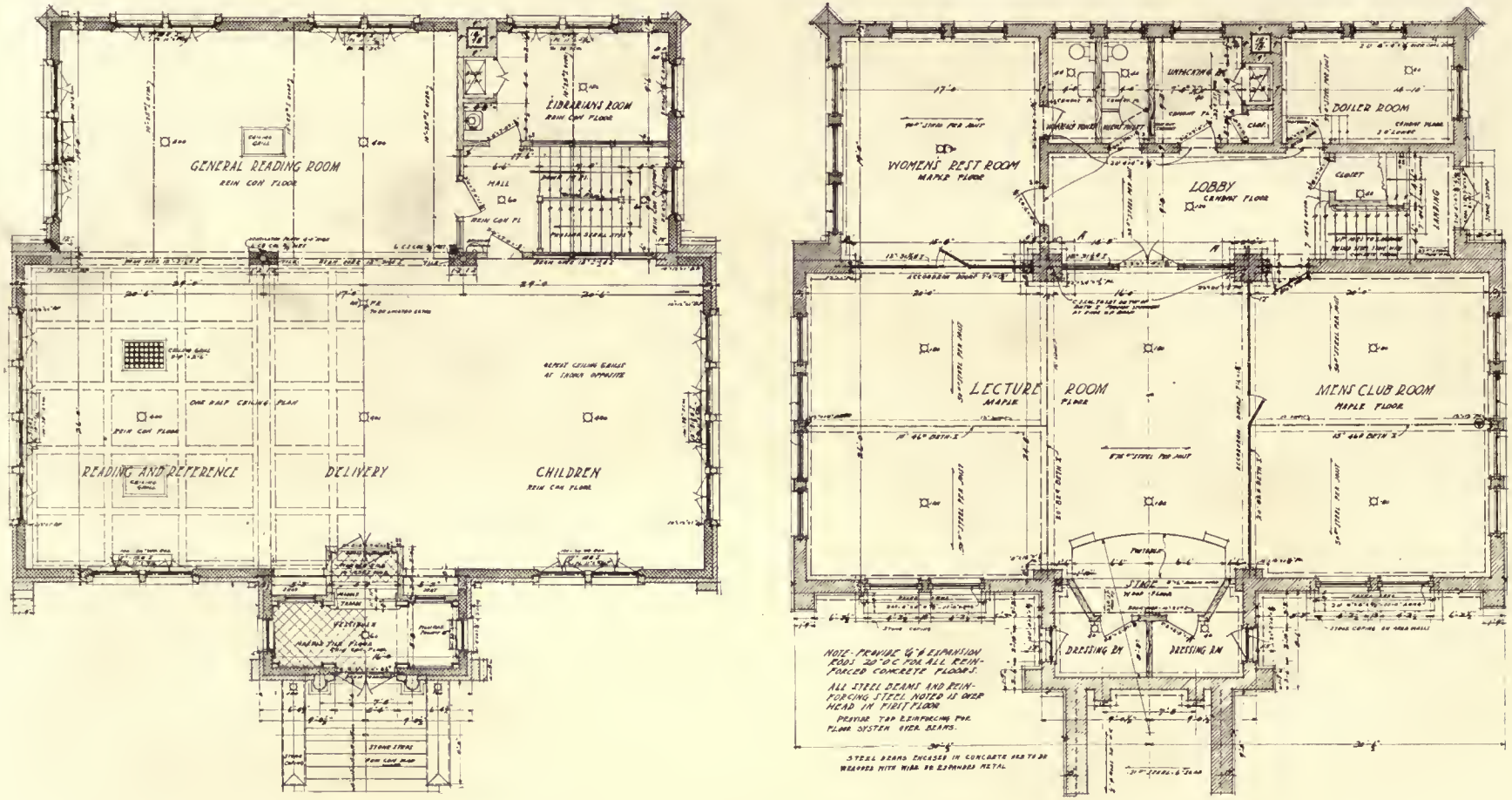

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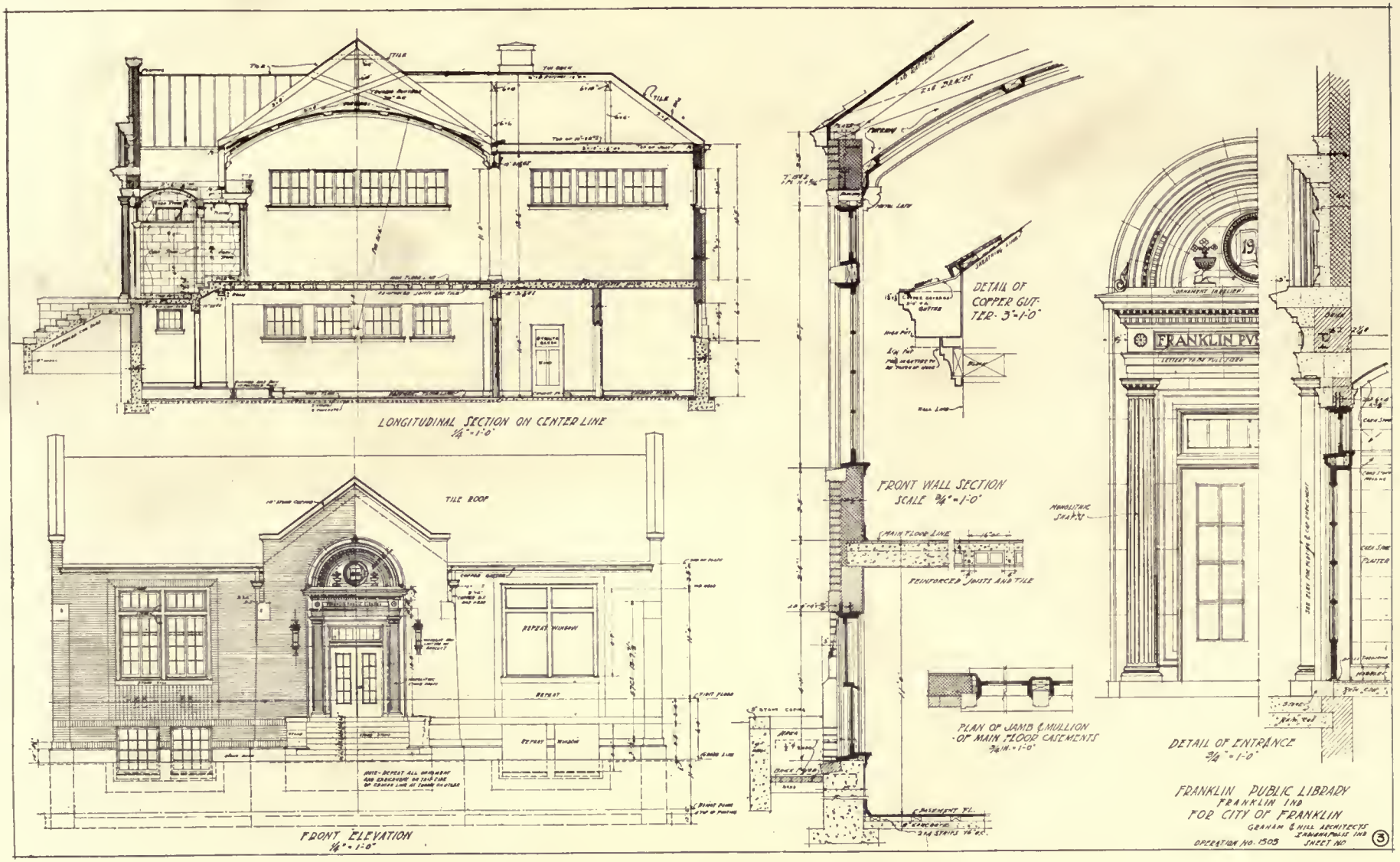

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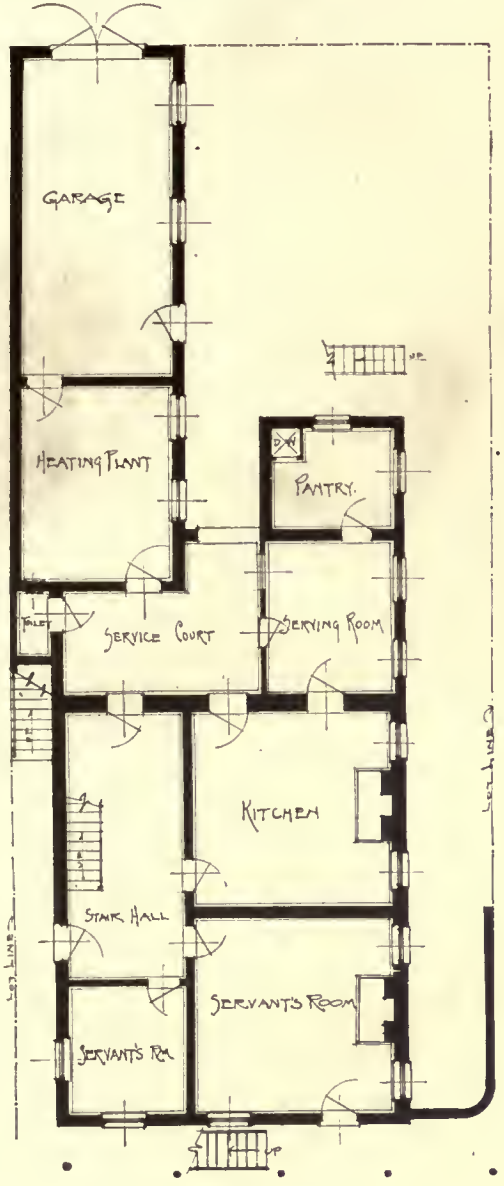
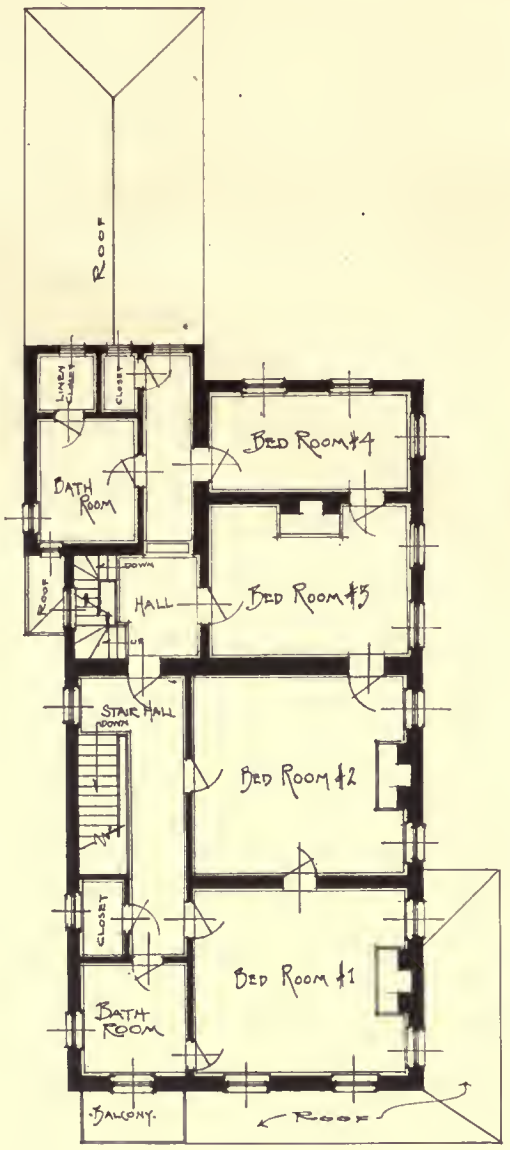
BEFORE REMODELLING

HOUSE OF DR. T. R. WARING, SAVANNAH, GA.

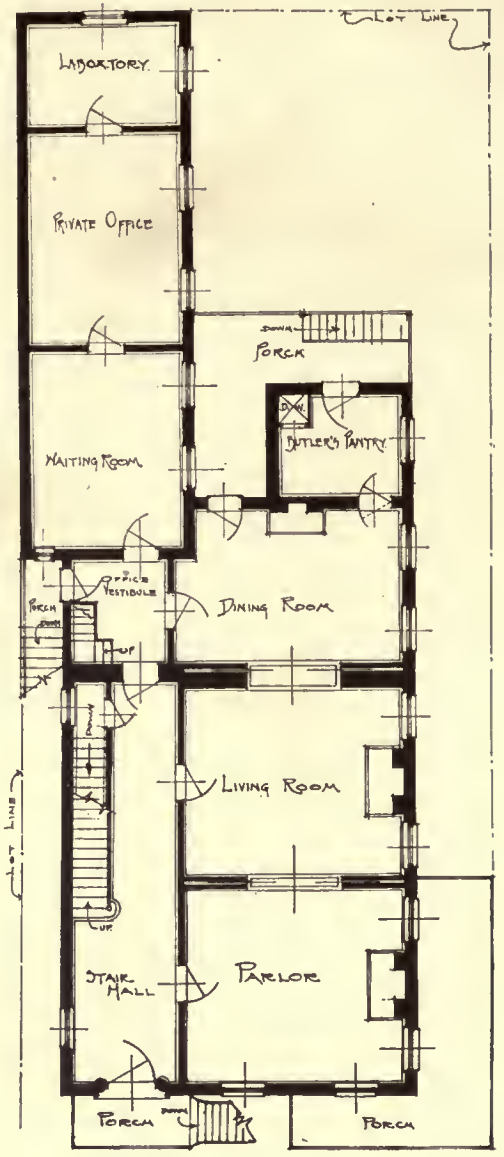
MR. J. DE BRUYN KOPS, *ARCHITECT*



BASEMENT FLOOR PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN

HOUSE OF DR. T. R. WARING, SAVANNAH, GA.

MR. J. DE BRUYN KOPS, *ARCHITECT*

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Founded 1876

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VOL. CXI JANUARY 10, 1917 No. 2142

SANITY IN ARTISTIC EXPRESSION

IN spite of the amount of writing that has lately appeared, calculated to create the opposite impression, it is nevertheless probable that erratic tendencies in art are really no more pronounced today than they have been at many times in the past. The reason for their seeming prominence is our present proximity to them. When the various interpretations of what we call "art" today —and to which educated minds generally take exception—are viewed in their ultimate form fifty years or a century hence, we doubt if the grave fears now frequently expressed by writers and speakers will be found to have been justified. Sanity in art, as in any of the professions, is its enduring quality. The grotesqueries and erraticisms of a group or groups of men may with confidence be regarded as purely ephemeral, forming but temporary distractions from a serious and upward trend. It will never require war or any social upheaval to suppress them. The correction will come as the result of the sober, serious, final judgment of a well-balanced thinking people.

However, Cubism or any of the recent expressions of art grouped under the name of post-impressionism is certainly not the work of incompetents. This is easily proven by the fact that among the most important of the cubists are men whose early work as artists has been characterized as dignified expressions of art. It is a sudden and radical change from the most catholic methods, from an expression of motive and amount of technique that have been acknowledged as artistically correct, to schemes of poor coloring, fanciful characterization of mental impressions, that to most of us suggests temporary aberration. That it is but temporary there is no reason to doubt. Indeed, what was hailed as "the new art" in architecture a few years ago has already run its course and no longer commands the respect or even the serious attention of practitioners anywhere. Poor and usually ignorant efforts to achieve originality are gradually being abandoned, and our architecture is improving as a consequence. It is now generally conceded that originality is to be commended when it is an improvement on existing forms, materials or methods, but not otherwise. As a matter of fact, it is the acceptance of this view that has definitely sounded the death knell of most of our recent fads in art.

THE VALUE OF ARCHITECTURAL SERVICES RECOGNIZED

A GRATIFYING instance of recognition of the value of architectural services is reported from Spokane, Wash. It seems that the members of the Board of Education in that city have reached the decision that no school buildings shall in future be erected for educational purposes unless the work is carried forward under the supervision of a competent architect who is responsible to the Board. It seems that the Board members are dissatisfied with results of the building policy formerly pursued, and have determined that a course now almost universally followed by individuals and corporations, successful in the business world, is the wisest for the city to follow in the construction of its

schools. Whether one architect will be employed for the entire work or one for each building has not yet been fully determined. It is stated, however, that in any case the architect will be paid the recognized rate of compensation, and the highest type of architectural service will be expected in return.

The wisdom of the action taken is beyond question. The results that will inevitably follow a strict adherence to the plan adopted will be so much more satisfactory than those previously secured as to constitute an object lesson in themselves. It is hoped that other cities where experience in the construction of school buildings has not been all that could be desired will be moved to follow Spokane's example.

JOSEPH PENNELL AND HIS CRITICS

WHILE Joseph Pennell may not be as irascible under criticism as Whistler was said to have been, he has repeatedly given evidence that he does not on that account lack the courage of his convictions. In the course of a reply which he recently made to the editor of the *Architect and Contract Reporter* of London, who criticized Pennell's drawings of munitions works and also the accompanying text written by Pennell, he contends that works of art should always explain themselves and stoutly maintains that his invariably do. He continues:

> When you say "Does Mr. Pennell really believe what he says?" as when he says "smoke gives the sky a beauty it never had before"—that "the lines of chimneys are finer than the lines of trees" that "no cathedral interior is more impressive than some rolling mills," and so on. Certainly Mr. Pennell does believe it, or he would not have said so, and if it is regrettable to be found guilty of enthusiasm over these grand subjects, I am most guilty—and I hope I always shall be. I do object to being found guilty of affectation. However, I hope I am enthusiastic, though it is a crime—I hope I am not affected, though that be a virtue.

Zola has defined a work of art as "a corner of creation seen through a temperament." This definition would exactly fit the present controversy. If, as has also been stated, "art is the refinement of the commonplace," Pennell has founded his art on a solid foundation, and if he can glorify his chimneys and his rolling mills, as he very often has done, he is treading the safe path toward eternal fame. To maintain that art should only portray the beautiful is to create a certain sympathy for it and lower the morals of an art loving people. The lessons that Hogarth taught were many and useful, although his subjects were not chosen for their beauty. Likewise, in our admiration for Fortuny's beautiful color effects, we lose sight of the gruesomeness of his subjects, often taken from abattoirs, and who will dispute that Pennell has taught us to look with more respectful and appreciative eyes on vast piles of brick and stone, whether in their assembling and building or in their grouping they have presented to us as they have to him the marvelous appearance which he has portrayed.

The Current Architectural Press

(*Continued from page* 24)

declaiming attitude of many of the older artists."

The iconoclastic tendency on the part of the younger generation of artists,—both painters and sculptors, is also becoming evident on the part of architects. The

(*FROM THE JOURNAL OF THE A. I. A.*)

PALAZZO CONTARINI FASAN, VENICE
AFTER THE DRAWING BY SAMUEL PROUT.

younger element regard their elders in art as inclined to "old fogeyism," while the older men shake their heads in deprecation of an evident attempt by younger artists to "short cut" a result that they have spent years in attaining. Much ink is being spilled by hysterical writers who on one hand believe they glimpse the dawn of a new art, and on the other by those who bewail the modern tendency as indicating the inception of a period of decadence.

There are no strictly architectural features in this issue, but current exhi-

(*FROM THE ARCHITECTURAL RECORD*)

WEST TERRACE, KANSAS CITY

bitions are written up and illustrated in an unusually attractive manner.

* * *

The December issue of *Good Furniture*, somewhat changed in makeup, presents

(*FROM THE ARCHITECTURAL REVIEW*)

MORRISTOWN PARISH HOUSE, MORRISTOWN, N. J.
BERTRAM GROSVENOR GOODHUE, *ARCHITECT*

the usual interesting articles, some of which, however, would seem to be outside the particular field so admirably filled by this publication. Mr. Charles D. Thompson's series on Art History Revealed, is brought to its second installment. This treats of the European Renaissance as a Result of Sex in Ornament. Mr. George Leland Hunter contributes an article on

(FROM GOOD FURNITURE)

AN INTERIOR

Modern Fabrics, a Study of Chintzes and Cretonnes. The discussion by Mr. William Laurel Harris on Musical Instruments reaches its tenth article.

* * *

The Carter Harrison Technical High School in Chicago, Mr. A. F. Hussander, architect, is the principal subject illustrated in *The Western Architect* for December. While this school has certain merits in design, it does not sufficiently suggest the character of its occupancy and in that respect suffers by comparison with a number of similar schools of recent erection.

Several industrial buildings of minor importance are illustrated as are also a number of country houses of moderate cost. The details of these illustrations will be found in our index on another page.

A discussion of "Thirty Years of Futile Smoke Prevention" closes with the following sentence:

"Until the individual sufferer from smoke in cities finds a way to make the municipality directly responsible for his losses from coal smoke, the situation shows little promise of change in spite of congresses of protest or advice."

* * *

The Architectural Review continues in its November issue the discussion of To Advertise or Not to Advertise. The present article is interesting as it includes the series of admirably composed advertising cards that have been placed by the Central New York Chapter, in Syracuse newspapers. The method employed has for its object the instruction of the public as to the duties of an architect, the value and importance of his services, and appears to be withal a dignified and strictly ethical procedure.

(FROM THE ARCHITECTURAL RECORD)

FRONT VIEW—RESIDENCE OF JOHN GLASS, ESQ., HIGHLAND PARK, ILL.
FRANK B. MEADE AND JAMES M. HAMILTON, *ARCHITECTS*

The illustrations comprise an interesting stone chapel in Morristown, N. Y., designed by B. G. Goodhue, a house in Washington, D. C., by John Russell Pope, and a good example of ledge stone work as applied to domestic architecture, by Dohring, Okie & Ziegler.

* * *

Reports presented to the recent convention in Minneapolis absorb a consider-

able part of the December issue of *The Journal of the A. I. A.* Space has been reserved, however, for the continuation of an installment of the series on Architectural Draftsmen, the present one treating of the work of Samuel Prout.

In scanning the various illustrations of this interesting series and studying the rare quality of the work of these earlier architectural draftsmen, it becomes apparent that we are losing, in our desire, no doubt, for greater speed,—many of the fundamentally essential qualities that marked the work of these earlier men. We might examine the present methods of our artistic training for an explanation of these things. Perhaps we do not do as much sketching as is necessary to a proper training of the hand and eye, or it may be —and herein lies the fault, perhaps— that we have not the time, or are not endowed with the patience to produce the work that these earlier men obviously spend many hours in studying and contemplating, aside from the actual time required for its portrayal.

Contemplated Purchase of Jefferson's Home

The House Committee on Public Buildings and Grounds is said to be considering the purchase of the Thomas Jefferson estate of Monticello, and its transfer to the keeping of the Daughters of the American Revolution. An appropriation of $500,000 with which to acquire the property has already been made.

Both the historical and architectural interests of Monticello are sufficient to warrant the step which seems about to be taken. Public sentiment in favor of the perpetuation of these monuments to the early life of this nation seems to be increasing, and failure on the part of those in position to save them, to take necessary steps looking toward their preserving to posterity is no longer regarded lightly.

Pennsylvania Academy Exhibition

The Pennsylvania Academy of the Fine Arts announces its 112th anniversary exhibition which will open to the public February 4th and close March 25th. The exhibition will be confined to oil paintings and sculpture by American artists. A long list of prizes and honors is announced.

Architectural Bodies Merged

The South Carolina Association of Architects has been merged with the South Carolina chapter of the American Institute of Architects, and the former organization disbanded. E. D. Sompayrac was elected president; D. C. Barbot of Charleston, vice-president.

The Housing Problem in Detroit

It is reported that close observers of the situation are of opinion that the housing problem, which for some time assumed a serious aspect for Detroit, is making progress toward solution in that city. It is believed that rents have reached their maximum, and that future developments will be toward a reduction rather than an increase. It is estimated that more than 4,000 residence buildings are now under construction in Detroit, which, according to the recognized scale of averages, will provide dwellings for some 30,000 people. Study of the problem on the part of various civic and business organizations, as well as a number of large employers, has tended to bring about a solution which, while not in any sense perfect, will at least afford relief from the serious conditions that have threatened during the past two years.

A New Type of Reinforced Concrete Water Tank

The accompanying reproductions from photographs of water tanks are taken from *Modern Building*, and show what is termed the "Goblet" design of stand pipe. The feed and service pipes or mains are carried through the stem of the goblet up into the base of the tank proper. The base or pedestal of the tank is of sufficient size and so designed as to withstand overturning of the tank under the most severe conditions of atmospheric disturbance. It is stated in fact that the Bay Minette tank withstood an 80-mile-an-hour wind without injury. The bottom of the tank proper consists of cantilever slab construction, into which the barrel of the tank is anchored, and the bottom in turn thoroughly anchored into the stem.

The capacity of each tank shown is 80,000 gals. The tank at Bay Minette, Ala., is 110 ft. in height over all, and the one at Northport, Ala., 65 ft. over all.

BAY MINETTE, ALA.

NORTHPORT, ALA.

The size of the tank proper is in each case 22 ft. diameter by 30 ft. high. The design by which these tanks were constructed was produced by Mr. Leonard H. White.

This new type of tank is particularly well adapted for use on private estates, or in connection with the smaller towns and villages where attention is given to appearance as well as utility.

Oldest Stone Structure

Scattered through the world are the remains of stone structures, in various states of preservation, that had their origin before the dawn of recorded history. Even on the Western Continent, in Mexico, Central and South America, are ruins showing the proficiency in stone working of the makers, of whom we know little or nothing. There are cyclopean walls in the old world that seem to have been erected by a race of giants, the very memory of whom has disappeared save for these monuments. But it may, we think, be doubted whether there is a single stone structure in any part of the world that antedates the pyramids at Sakkarah, Egypt, close to the ruins of the great city of Memphis. The oldest and most famous of the eleven pyramids standing on the Sakkarah plateau is that peculiar stepped and truncated pyramid called by Arabs Mastabatel-Pharaoon. It is, of course, impossible to fix its date with any degree of accuracy, but the consensus of opinion is that it is the oldest large structure of cut stone that is now standing in the world.—*Stone.*

Research Fellowships, University of Illinois

To extend and strengthen the field of its graduate work in engineering, the University of Illinois maintains fourteen Engineering Experiment Station Research Fellowships. One other such fellowship has been established under the patronage of the Illinois Gas Association. These fellowships, for each of which there is an annual stipend of $500.00, are open to graduates of approved American and foreign universities and technical schools. Appointments to these fellowships are made and must be accepted for two consecutive collegiate years, at the expiration of which period, if all requirements have been met, the degree of Master of Science will be conferred.

Nominations to these fellowships, accompanied by assignments to special departments of the Engineering Experiment Station, are made from applications received by the Director of the Station each year not later than the first day of February. The nominations are made by the Station Staff, subject to the approval of the Executive Faculty of the Graduate School and the President of the University. Appointments are made in the spring and they take effect the first day of the following September.

Additional information may be obtained by addressing

The Director, Engineering Experiment Station, University of Illinois, Urbana, Ill.

Pen Drawings of Old New Orleans

Old New Orleans, and particularly that part of the old city known as the "French quarter," possesses an artistic appeal to a visitor who for the first time sees this section and wandering through its narrow streets and up its teeming alleys, seeks to discover the architectural "bits" that are so plentiful.

The old city is full of things that are in the strictest sense "worth while." Much of it has been photographed and much more lives in the sketches of students and artists, some of national fame, who have felt and responded to the certain "atmosphere" or old world aspect of the French quarter.

Even men who live on the very rim of this old French quarter find they are constantly drawn toward it. In proof of this we have before us a series of pen drawings done by Frank G. Churchill, an architect of New Orleans. They form an interesting contribution to the artistic record of this neighborhood. Perhaps the greatest charm of these particular sketches is their casualness. There has been no attempt made to cover the entire territory; they are merely impressions set down during rambles about the old city.

This book may be had by a remittance of $1.50 to Mr. Churchill, whose address is Henner Building, New Orleans.

INDUSTRIAL INFORMATION

Arco Products

The Arco Company, Cleveland, O., has issued a series of publications describing not only its products which consist of paints, varnishes, waterproofings, bonding coats, foundation coats and stone backing, but also the organization, the men, the methods, the policy and the plant. Pictures of the factory are shown giving a good idea of the various processes through which materials entering into the composition of paints are subjected. They also impress upon the reader the great care which is given to these products in order to insure their quality, and so maintain the standard the company has set.

In the booklet devoted to the description of some of the products, it is stated that no standard has yet been established by the architect for his dampproof coatings. The classification "bituminous coating" means little in itself. There must be something more than a classification back of the black brush-applied coatings, and this something, if successful results are to be assured, must be founded upon and protected by the reputation and commercial position of the manufacturer. It is with a realization of these requirements that the Arco products are produced.

Much information is given in these publications not only concerning the manufacturers and their products but regarding their application also. It is now generally realized by manufacturers that failures are quite as often due to improper use of materials as to any defects inherent in them. It is to avoid such failures that explicit directions are given in these booklets. Copy of any or all of these publications may be had by architects upon application.

Tile Floors and Walls for Hospitals

The Associated Tile Manufacturers of Beaver Falls, Pa., have issued an attractive book of forty pages designed to present, both graphically and by means of text, the advantages of tile for floors and walls of hospital buildings. It is stated that one of the most far-reaching hospital problems of to-day is the sanitary, durable and efficient treatment of the interior. It is pointed out that no more important duties fall within the province of the building committee than the selection of a suitable finish for floors, walls and ceilings, which play a conspicuous rôle in the healthfulness of the occupants.

It may properly be assumed that the building committee will be guided in this matter by the architect whose knowledge and experience of materials available would in the nature of things justify his employment quite as much as his ability in design. It is claimed that tile offers advantages unobtainable from other materials, as it is durable, sanitary and comparatively inexpensive.

The illustrations present views of operating rooms, wards, diet kitchens, toilet rooms, laundries, dining rooms, rest rooms, etc., all finished with tile. Special tile is obtainable for door jambs, corners, angles, etc., eliminating almost entirely the need for any other material except for the operating members, such as doors, window sash, etc. It is pointed out that various color schemes can be employed where desired, and that the finish can be made quite as attractive where tile is used as where any other materials are chosen.

Much information on the subject of hospital finish is furnished in this book, copy of which may be had by architects upon application.

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STREET VIEW, POMPEII, ITALY (STRADA DI SALUSTIO)

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, JANUARY 17, 1917 NUMBER 2143

INDUSTRIAL HOUSING—PART I

By LAWRENCE VEILLER

Secretary, National Housing Association, New York City

IT IS unnecessary for me, I know, to do more than merely refer to the conditions that prevail to-day in many industrial towns in this country. They are too well known and have been too often described to require extended comment.

Speaking generally, it may be said that the great majority of workers in those towns live in squalid and sordid surroundings, in homes that are not beautiful, and many of which do not have the basic elements of civilized life.

These conditions are the natural consequence of our respect in this country for "*laissez faire*" principles, for the rights of the individual, expressed so often in the statement that the conditions in a man's home are no business of his employer.

Until this year, the average employer of labor has been reluctant to concern himself with the conditions under which his workmen live, and, when urged to give consideration to this question, has generally dismissed the subject by saying: "My business is to make automobiles. I know nothing about housing workmen, and I don't want to bother with it. I *do* know how to make motors and cannot possibly take the time to learn how to house workingmen. Nor, do I want the complications in my relations with labor that are bound to come from such work. I have troubles enough in that direction now without having any more."

That, I think, is a fair statement of what has been the point of view and the attitude of the average employer of labor —until this year.

HOUSING FAMINES

But this year has seen a great change. We have had nearly every manufacturer in the country who owned a machine shop have demands made upon his plant that it could not meet. We have seen communities suddenly import into their towns 10,000 workers in a single year; we have even seen one community import as many as 30,000 workers in a single year.

Of course there are not houses enough for this suddenly augmented population. People naturally are not going to build ten thousand homes in anticipation of a future population that no one could foresee. So, it is not at all strange that some communities should have been caught unawares, and that we have housing famines.

The situation for the manufacturers is serious, however, for they cannot run their plants unless their workmen have proper places to live in. And so, whether they want to or not, many employers of labor are being forced to take up the question of housing.

NOT MERELY MORE HOUSES

Their problem is not, as many of them seem to think, to get merely a sufficient number of houses in the shortest possible time. Difficult as that may be, it is a comparatively simple problem compared with the real problem of providing homes of the right kind within the means of the workingmen and which shall prove a permanent betterment to the community, and not a detriment.

It is quite natural that the employer of labor who finds himself in the situation

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just described, and who has put off too long the consideration of the housing of his new workers, should in desperation be willing to accept any kind of house that can be put up in the shortest possible time and that he can induce workingmen to live in.

To many employers, confronted with such a situation, to talk of the right kind of houses, of good planning, of intelligent city development, of garden suburbs, of beauty, of economic construction, of studying the future needs of the community—to talk of any of these things seems "idealistic" and the man who suggests them is likely to find himself classed as impracticable and a dreamer.

Notwithstanding this, there are many employers of labor who have had the vision to realize the vital importance of these considerations and who have acted upon that realization. They have seen clearly that it is bad business for them and for the community in which they live, to build houses which are not to be an influence for good in that community and which are not going to react favorably upon the efficiency of their employees.

I am glad to state that there are to-day in this country as many as 80 large employers of labor who have acted upon this realization and have undertaken the housing of their workers.

As soon as the employers of labor throughout the country realize that it pays to house their workmen properly, instead of 80 concerns undertaking this work, we shall find 8,000.

How Better Housing Pays

That it does pay in all sorts of ways is beyond dispute. If anyone doubts it, let him talk with the employers of labor engaged in work of this kind and let him learn from them the advantages to their industry that have resulted in what may be termed the by-products of this social enterprise.

It pays in the greater efficiency of the worker, in an increased interest in his work and a higher degree of skill. It pays in greater continuity of service; it means less "hiring and firing" of employees. It pays in reducing the amount of days' labor lost through illness and intemperance. It pays in a more contented community. It stabilizes labor. It reduces strikes and labor troubles. For the man who has a contented home and is living under nearly ideal conditions thinks not merely twice, but many times, before he is willing to sacrifice his home and put in jeopardy the proper upbringing of his children and the proper domestic life of his whole family.

Many Problems, Not One

In discussing this question, we wish it understood that we are not discussing the housing problem in general, but one aspect of it—viz., Industrial Housing. That is, the housing of employees at industrial plants as distinguished from the general housing of all the people of a community.

This problem of building houses for workingmen needs to be considered from various angles. Different phases of the problem need to be clearly differentiated or there is likely to be confusion of thought and considerable misunderstanding. There are several problems involved, not one, and some of them wear quite different aspects.

For instance, questions involved in housing the single worker are totally different from those that need to be studied in connection with the housing of men with families. This is too often lost sight of and in discussing this question it is, as a rule, discussed solely with reference to the problems of the man with a family.

The chief problem of industrial housing so far as the type of habitation is concerned, to my mind, is the problem of the single man—single, that is, so far as America is concerned. He may be unmarried or his wife and family may be in Europe. The effect is the same in the consideration of the best method of housing him here in America.

Again, we need to differentiate clearly between the best type of house for the higher paid skilled mechanic earning $25 a week and more and the house best suited to the unskilled day laborer whose earnings seldom rise above $15 a week.

Also, we need to differentiate in both

these classes of dwellings in our plans for housing the American workingman as distinguished from the alien.

The Skilled Worker

Considering first the type of house for the skilled mechanic of American birth earning $25 a week and more, I believe there is no real problem. Enough has been done in this country through a long period of time to demonstrate conclusively not only that the best type of house for this class of worker, but the one that he demands and is accustomed to get, is the two-story, single family, detached house.

There are no serious problems involved in the development of the plan of a house of this type, consisting, as a rule, of five to six rooms.

The question of whether its exterior walls shall be built of wood or of brick or concrete or hollow tile blocks or concrete slabs or some other form of material depends largely upon local considerations and variations in the cost of such materials in local markets, as well as the cost of various kinds of labor. Climatic conditions also enter into the question.

Of course, the ideal type of house is a fireproof one, but the prevailing type that is used to the largest extent in America is undoubtedly the frame house. The time is soon coming when the frame house will disappear and will be replaced by a house with fireproof walls and roof, if not wholly fireproof; as the cost of lumber goes up and the cost of fireproof material comes down the result is bound to be that the frame house will disappear and be succeeded by a building of greater fire-resistive qualities.

The interior arrangement of a house of this kind presents few problems. The type is almost universal—a parlor, a kitchen and three or four bedrooms, with bath. In some cases a dining-room as well as a parlor. Intelligent planning would place the living rooms on the lower floor and the bedrooms on the upper.

When it comes to the placing of such houses upon the land, I regret to say that there is still need for much educational work in this country.

Notwithstanding the fact that in most industrial communities land values are low, there has been entirely too much crowding together of workingmen's dwellings and entirely insufficient space left between adjoining buildings.

In houses of this kind there should be a clear space of 20 feet between buildings if we are to have the right kind of conditions as to light and air and also have an adequate treatment of open space with grass plots and flower gardens such as the higher paid mechanic is capable of developing and in the development of which we wish him to take pride.

Certainly, the minimum space between such buildings from the point of view of health and sanitation is 12 feet. We know, however, that the practice in many parts of the country is very much less than this. We are all familiar with the shameful huddle that industrial communities, as a rule, present, with one house in close proximity to the houses on each side of it and nothing but an objectionable narrow slit, often as little as 3 feet, left between the two buildings.

Such spaces are worse than nothing. They are a greater fire danger than where houses are built close together with no space between, and from the point of sanitation they are highly objectionable. No sunlight is furnished to the windows which open upon these dark pockets and they become a dark, damp place which cannot adequately be treated and which in a short time often becomes a gathering place for various kinds of objectionable waste materials.

It is far better to build dwellings in a row or "terrace" unless adequate space can be left between buildings.

The only serious problem, it seems to me, involved in the housing of workers of the type that we have been considering is the question of financing the enterprise and that problem underlies all phases of the question of industrial housing. Wherever in any community local capital can earn 10 to 12 per cent in industrial enterprises it will seek investment in those enterprises and it will naturally be difficult to secure capital for housing enterprises which return 5 per cent or 6 per cent at best. (*To be continued*)

COMPETITION TO SECURE ARCHITECTURAL TREATMENT OF STREET INTERSECTIONS*

THE Pittsburgh Beaux Arts Salon has just completed its first competition and promises to become an important factor in the encouragement of applied art in the Pittsburgh district. The organization, new to Pittsburgh, is composed of a group of influential citizens dedicated to the task of encouraging the beautification of the city along practical lines and in accord with plans that include service as well as ornament—the blending of beauty with utility.

FIRST PRIZE DESIGN

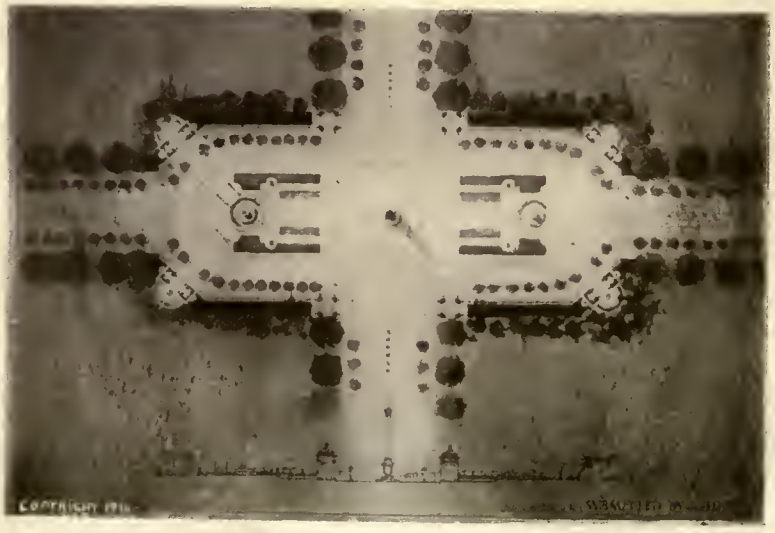
The first competition was in connection with the treatment of street intersections in the residential district. The competition was open to all architects, engineers, and students resident of Allegheny county. Restriction to local residence was in accord with the by-laws of the organization which provides that a function is to "bring to the attention of public-spirited and influential citizens the talents of local artists, architects and skilled artisans by means of competitions and public gatherings."

The competition called for a dual set of plans—plan and elevation—and treatment of actual, existing street intersections; with a view of proposing improvements to include beautification and facilitation of traffic.

Eighteen sets of plans were submitted anonymously. By the suggestion of circles, triangles and elliptical and other plans, suggestions were made along lines applied in the famous "circles" in Washington and boulevard intersections in Paris.

Competitors were required to specify actual intersection treated and make provision for readjustment of car tracks and assume that four lots adjoining the present right angle crossings were acquired by the municipality or private interest.

The assumption of the latter condition being that enhancement of value by the improvement will more than compensate for the condemnation. The Pittsburgh



PRIZE-WINNING DESIGN—BY J. P. MORGAN

*The designs reproduced herewith are copyrighted by the Pittsburgh Beaux Arts Salon.

Beaux Arts Salon has already had encouragement from some influential property holders to adopt some of the suggestions offered in this competition.

The committee on awards consisted of Frederick Law Olmsted, of Boston,

SECOND PRIZE DESIGN

the noted landscape architect; Benno Janssen, a prominent Pittsburgh architect, and F. F. Nicola, of Pittsburgh.

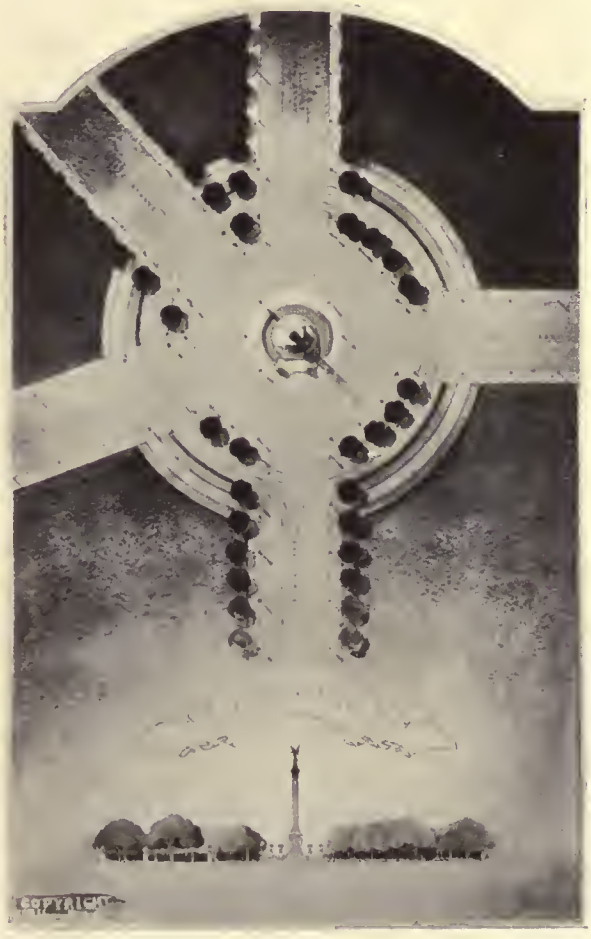
The first prize winner was John P. Morgan, a 21-year old senior in the School of Applied Design, Carnegie Institute of Technology. Mr. Morgan is employed by the firm of Rutan & Russell, architects. W. Pope Barney, associated with Rutan & Russell, submitted the design that was awarded second prize, or in this case, first honorary mention. Mr. Barney is a member of the faculty of the School of Applied Design.

Third award was made to W. T. Ammerman, a student in the School of Applied Design of the Carnegie Institute of Technology and employed as landscape architect for A. W. Smith & Company of Pittsburgh.

The designs have been placed on view in the Carnegie Institute Art Galleries. Practically all provide for embellishments in the center of the street intersections; such as monuments, memorial fountains, pylons, pergolas, colonnades, arcades and even shelter houses and public comfort stations.

THE REPORT OF JURORS

The jurors for the First Competition of the Beaux Arts Salon of Pittsburgh have examined the sixteen sets of drawings submitted to them, showing treatments of the intersection of two streets in a residential district, and respectfully submit the following report:



SECOND PRIZE DESIGN

The design numbered three (3) is premiated, and the jury recommends the award of the prize to its author, on the

ground that it meets well the practical requirements of traffic at an important intersection of streets in a residential district, and is one of the two most beautiful designs submitted.

First Honorable Mention is awarded to the design numbered twelve (12) for its

"ISLAND" DESIGN REFERRED TO IN JUNE REPORT

notable beauty of design and presentation.

Second Honorable Mention is awarded to the design numbered fifteen (15).

Five of the designs, including that receiving first honorable mention, show a disposition of car tracks for which a number of arguments can be made, but which the jurors regard as fundamentally wrong from the standpoint of traffic regulation. In these four designs the car tracks follow around the outer limits of the open space, requiring all other vehicles to go across the tracks into the central space, and to cross back again when leaving the central space.

In the design numbered fifteen (15), and to some extent in that numbered twelve (12), the congestion which would be caused by the needless double crossing of the street cars and the vehicular traffic is diminished, and the loading and unloading of passengers is facilitated by providing places for cars to stand in the angles between the entering streets; but at its best, the tendency of this style of plan would be to delay rather than to facilitate the passage of cars and other vehicles through the point in question.

Four of the designs present a type of plan differing from the ordinary cross roads, mainly in the clipping off of the four corners, so as to give more space to traffic, in the monumental treatment of these four corners, and in the occurrence of a central object of more or less monumental character, around which traffic is to be directed. Where the central object is small (like a mere lamp post) and traffic is allowed to hug it closely, this type of plan is thoroughly convenient for traffic, but none of the designs of this type are very distinguished works of art.

The design numbered eleven (11) is interesting as the only one which provided a self contained island transfer station for street car passengers, traversed by all the car lines, and protected from automobile traffic. It offers, however, an unreasonable obstacle to thorough vehicular traffic on Craig Street. While suggestive of interesting possibilities, in the way of picturesque composition in connection with the Cathedral, it is not at all well studied architecturally.

Of the other designs, for more or less complicated and difficult intersections, number six (6) offers a good plan, but the elevations, though skillfully drawn, are not well designed.

Respectfully submitted,

FREDERICK LAW OLMSTED,
BENNO JANSSEN,
F. F. NICOLA.

THE EVOLUTION OF THE PRISON PLAN—PART IV

By REXFORD NEWCOMB, B. S., M. A.,
University of Southern California

MATERIALS OF CONSTRUCTION

LASTLY, the materials used are of the most importance from the sanitary point of view. The old material of construction was stone; stone walls, stone floor, and in some cases stone roof or ceiling. But with the advent of Portland cement and steel the construction of the cell has been revolutionized. Walls are now frequently of concrete, faced on the outside with brick or stone or left plain, while the inside is finished smooth and enameled, the floors are granolithic and finished smooth. Porcelain would make an ideal wall surface for the cell, but its expense makes it prohibitive at the present time. Glazed bricks make a sanitary wall and these were used in the new Stillwater Prison. The flooring material in the cell houses at Stillwater is marble produced in the state. The walls can be washed down with antiseptic solution and a vacuum cleaner system removes all dirt and dust, which is one of the great disease-spreading mediums in prisons as well as elsewhere. All precautions should be taken that will facilitate the sanitation and with the finely organized systems for cleaning that we have to-day there is no reason why the prison cannot be made as sanitary as any other great institution where there are great numbers congregated.

With the modification of the system of penal treatment, many new reformatory measures have been introduced. Work has now long been considered reformatory, but it is only recently that it has been considered a means of making the prisoner earn his own keep, so that the state will be relieved of the burden. With the organization of this labor on an economic basis came the need for shops and manufactories, and nearly every state penitentiary in the United States has its manufacturing establishment in connection with it. Kansas Penitentiary makes binder twine,[1] Minnesota makes binder twine and farm implements. These are

[1] Eighteenth Biennial Report, Kansas State Prison.

Courtesy *Western Architect*

MAIN CORRIDOR SHOWING ENTRANCE TO CELL HOUSE

MINNESOTA STATE PRISON GROUP, STILLWATER, MINN.
MR. CLARENCE H. JOHNSTON, *ARCHITECT*

great agricultural states and the prison is made to serve the state. The state prisons of New York manufacture over 700 different articles, which are sold to other state institutions and state departments. So then the designer must take into the consideration the occupation of the prisoners. The hospital is another necessity, as is the school, the library, the administration building, the baths, the power-house, the water plant, the chapel, the laundry, the kitchen, the refectory, and all the service departments. The location in a large way determines the occupation of the inmates and the occupation determines the layout, architecturally. As an example of fitness for industrial operations, the new Minnesota Prison is a model (Figs. 22 and 23). The industrial part of the prison has been treated as a great manufacturing plant. The Colorado Penitentiary at Canon City as a farm prison is considered well adapted for its uses.

After all, "the real test of the excellence of a prison system," remarks Wines, "is its adaptation to develop in its subjects the power of self-control. Like the lunatic and the idiot, the criminal, if he ever had normal power of self-control, has lost it by disease or disuse. It is therefore not only necessary to restore or to create it, but to demonstrate the precise degree to which it has been developed. This the Pennsylvania system does not do, since it sedulously guards its subjects from external temptation. Neither does the Auburn system accomplish this end." The new system is a combination of the best parts of these systems with the maximum of reformatory elements added thereto. A prison plant must, obviously, be, then, a plant for the furthering of these ends. Any scheme or arrangement which hampers either the system of reformation or admits of unsanitary conditions is a failure. The model prison is the prison that fulfills these requirements.

Many new schemes are being brought out as solutions of the architectural problem at hand. A noteworthy conception is that for the design of the new Illinois State Prison to be built near Joliet (Fig. 17). It was designed by the State Architect, Mr. W. C. Zimmerman, and combines a series of Panopticons, so to speak, by means of corridors to a great dining hall, which is in turn connected with the necessary service departments pertaining to the commissary department. To the right is the chapel, to the left is the hospital, while the workshops, in reality a great manufacturing plant,

(*Continued on page* 43)

CELL HOUSE FROM OUTSIDE THE WALLS

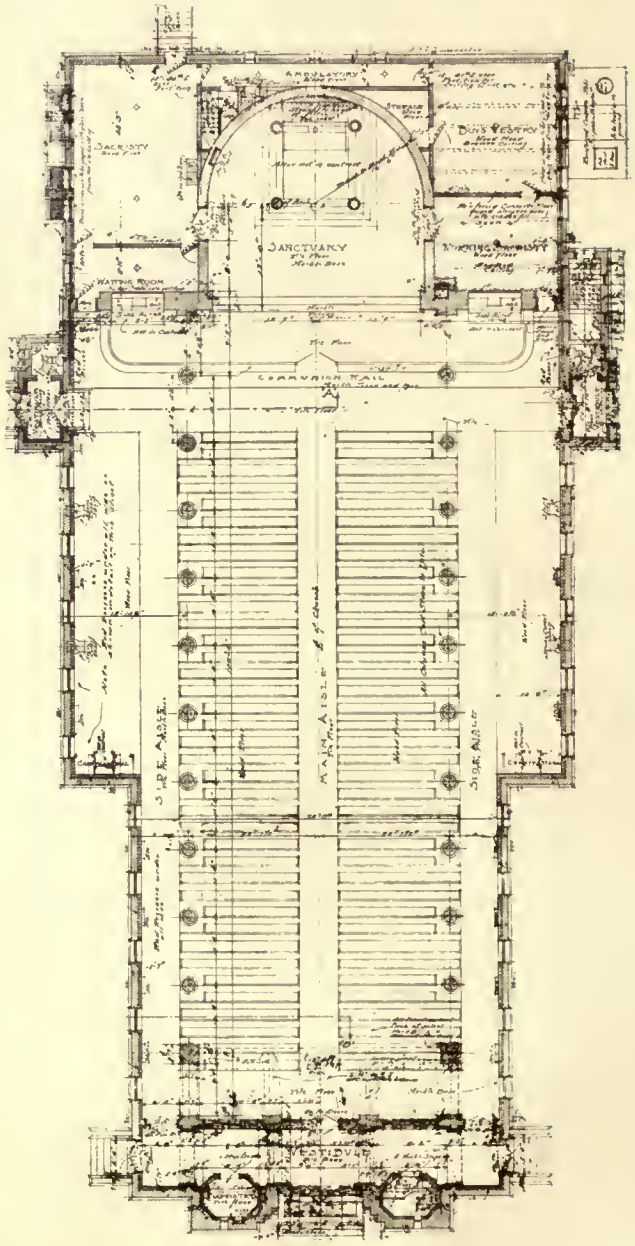
MINNESOTA STATE PRISON GROUP, STILLWATER, MINN.

MR. CLARENCE H. JOHNSTON, *ARCHITECT*

CHURCH OF ST. MONICA, ROCHESTER, N. Y.

MR. JOHN T. COMES, *ARCHITECT;* MR. JOHN E. KAUZOR, *ASSOCIATE*

This church cost, complete, $75,000. Seating capacity 1000. The floor is fireproof, the aisles, sanctuary and vestibule being of tile. The interior columns are of marble



CHURCH OF ST. MONICA, ROCHESTER, N. Y.

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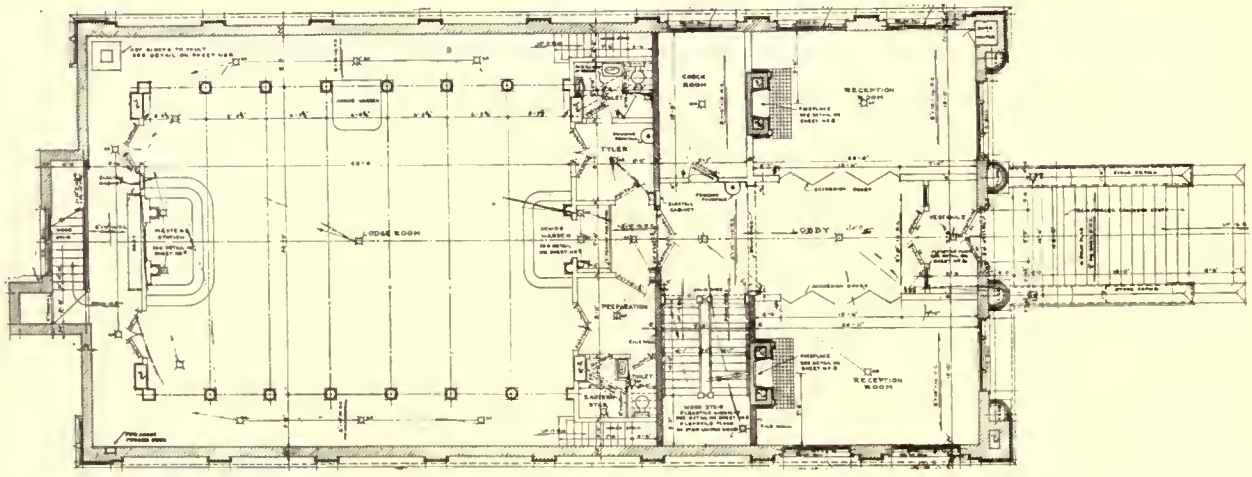
MASONIC TEMPLE, NOBLESVILLE, IND.

MR. DONALD GRAHAM, *ARCHITECT;* MESSRS. GRAHAM & HILL, *ASSOCIATE ARCHITECTS*



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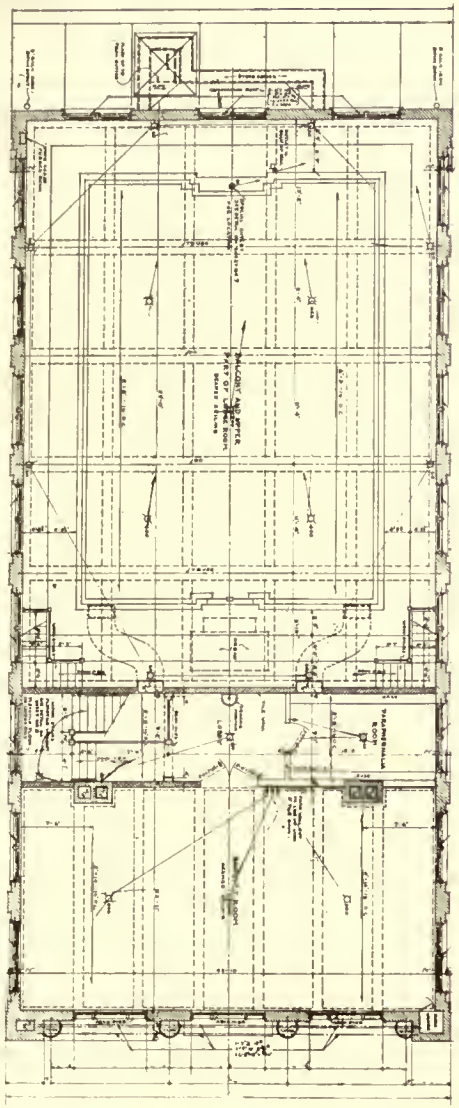

MASONIC TEMPLE
NOBLESVILLE, IND.

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MR. DONALD GRAHAM
ARCHITECT

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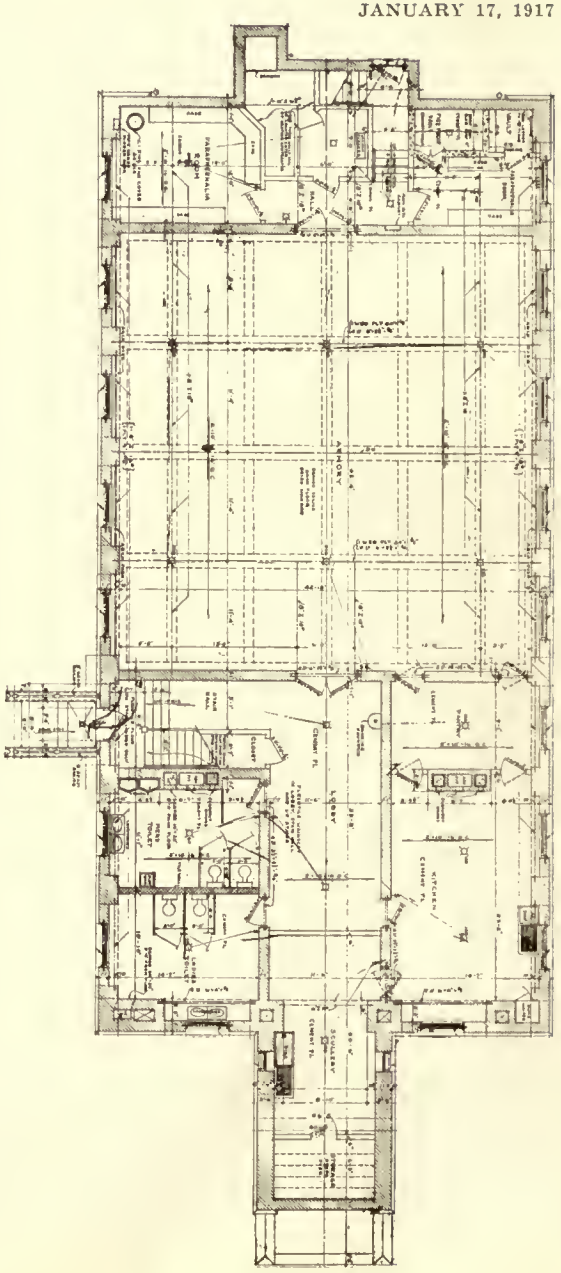
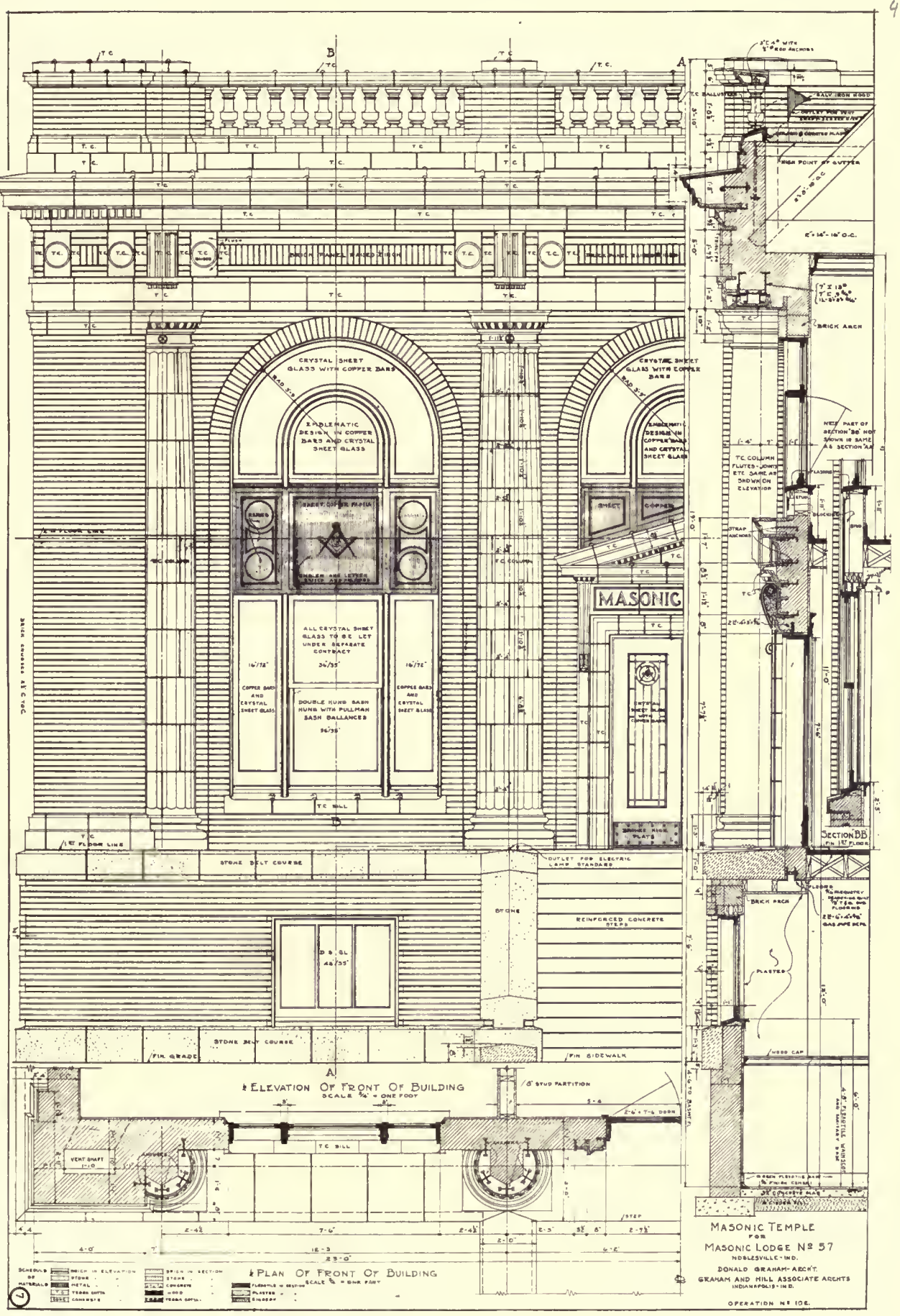
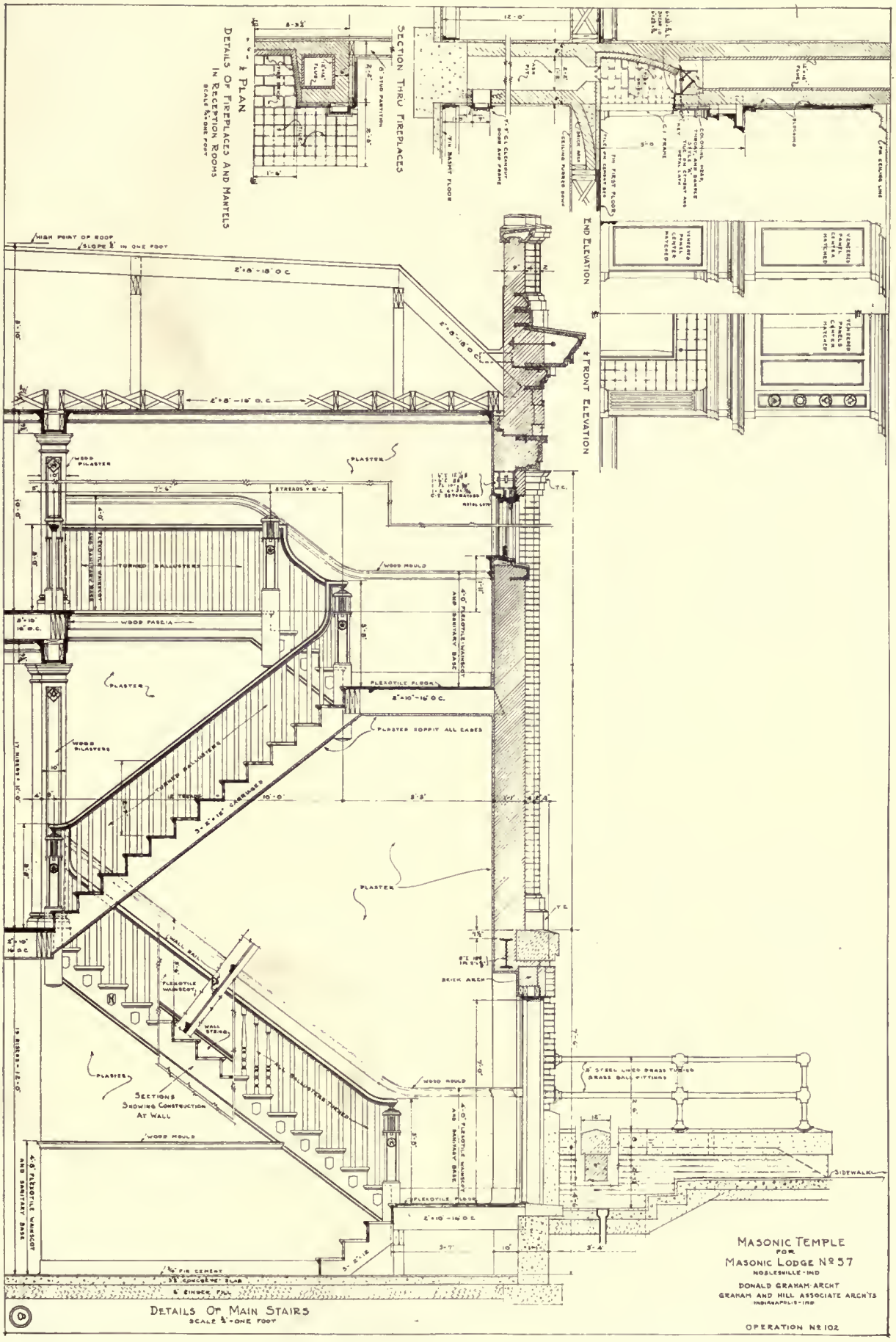
MESSRS. GRAHAM & HILL
ASSOCIATE ARCHITECTS




CRYSTAL SHEET GLASS WITH COPPER BARS
EMBLEMATIC DESIGN IN COPPER BARS AND CRYSTAL SHEET GLASS
ALL CRYSTAL SHEET GLASS TO BE LET UNDER SEPARATE CONTRACT
DOUBLE HUNG SASH HUNG WITH PULLMAN SASH BALLANCES
MASONIC
STONE BELT COURSE
REINFORCED CONCRETE STEPS
BRICK ARCH
PLASTER
SECTION BB
A ELEVATION OF FRONT OF BUILDING
SCALE 3/16" = ONE FOOT
PLAN OF FRONT OF BUILDING
MASONIC TEMPLE
FOR
MASONIC LODGE Nº 57
NOBLESVILLE - IND.
DONALD GRAHAM - ARCH'T.
GRAHAM AND HILL ASSOCIATE ARCHTS
INDIANAPOLIS - IN D.
OPERATION Nº 108.

MASONIC TEMPLE, NOBLESVILLE, IND.

MR. DONALD GRAHAM, *ARCHITECT*; MESSRS. GRAHAM & HILL, *ASSOCIATE ARCHITECTS*



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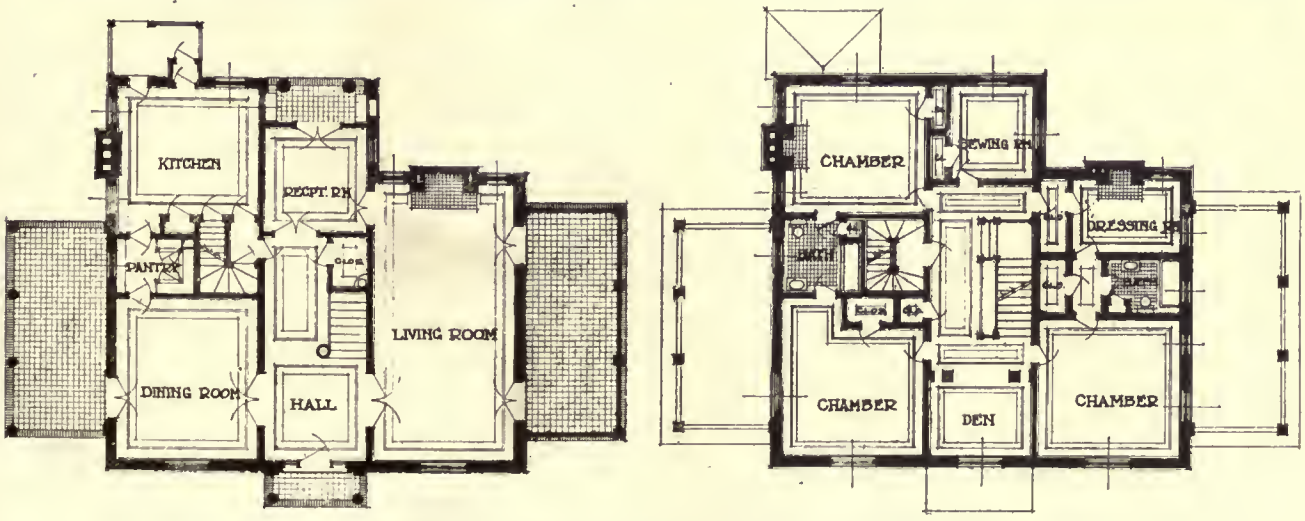
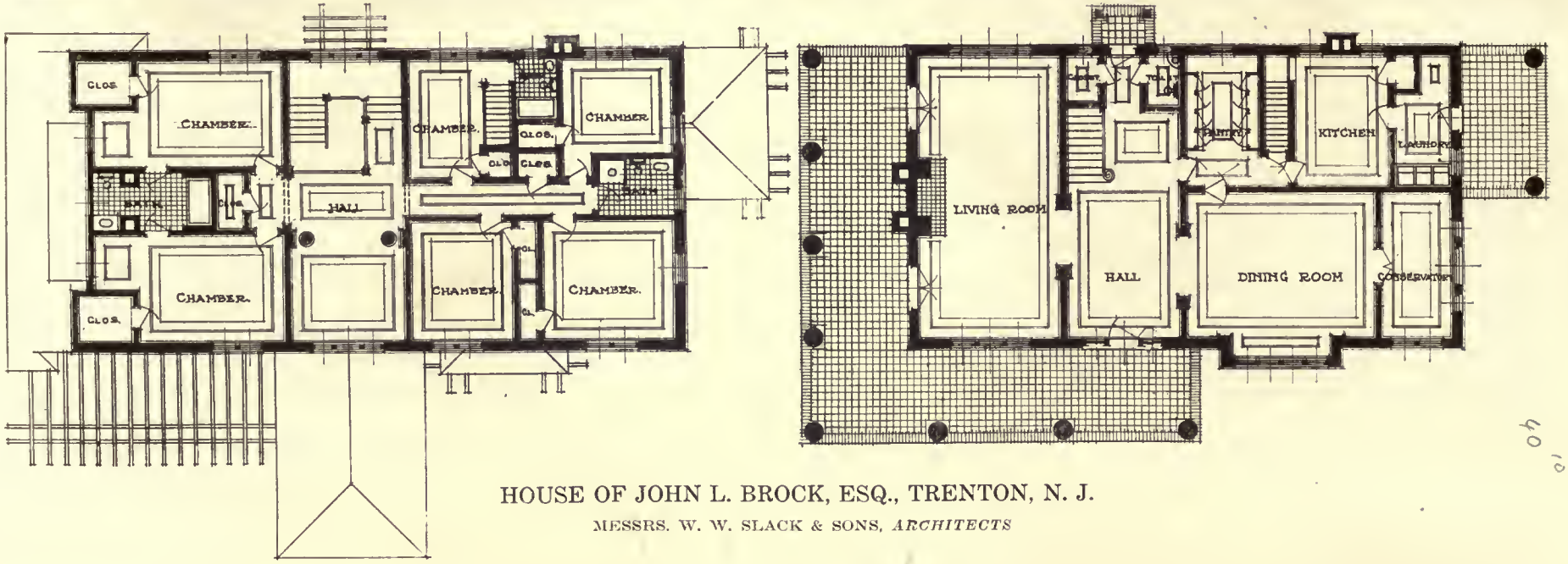


HOUSE OF J. CORNELL MURRAY, ESQ., TRENTON, N. J.

MESSRS. W. W. SLACK & SONS, *ARCHITECTS*



HOUSE OF JOHN L. BROCK, ESQ., TRENTON, N. J.

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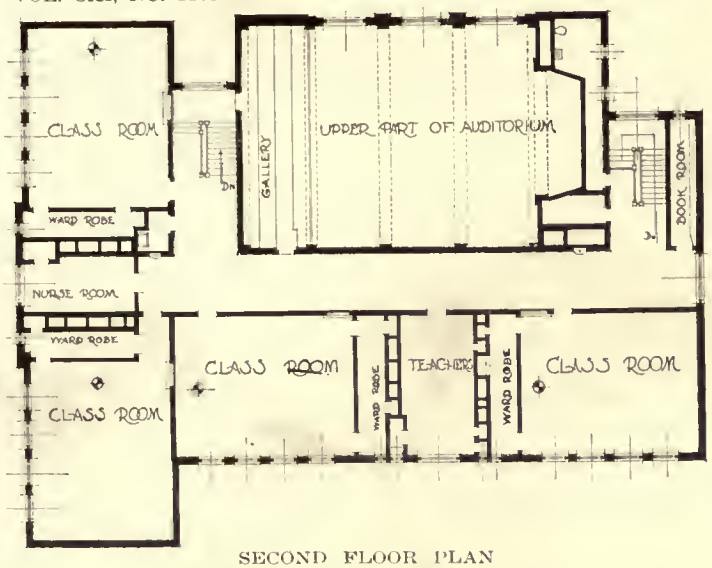
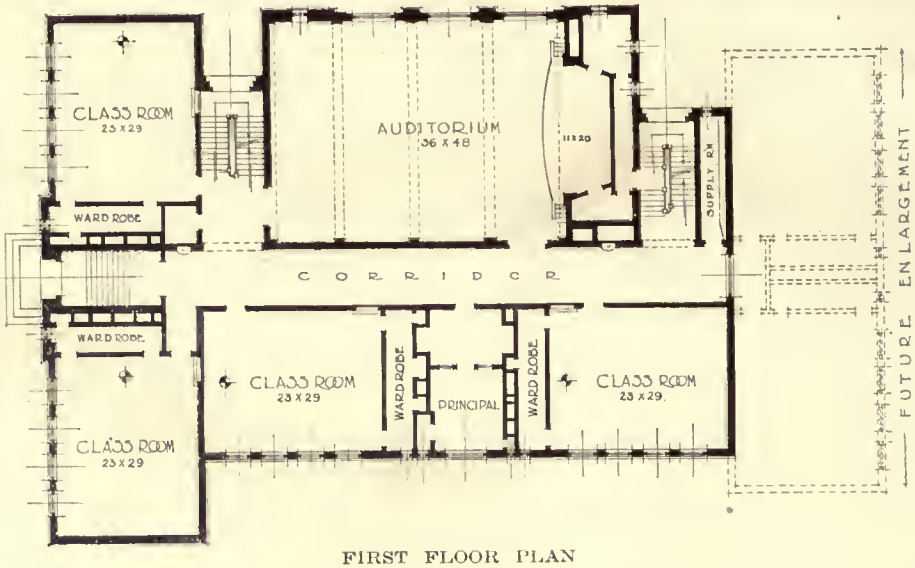
ADAMS SCHOOL, LEXINGTON, MASS.

MESSRS. BRAINERD & LEEDS, *ARCHITECTS*



SECOND FLOOR PLAN



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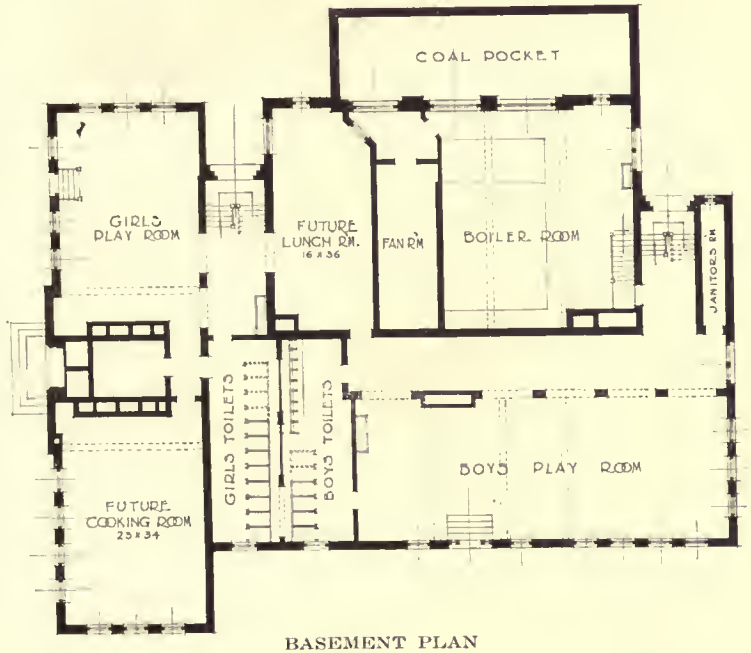

BASEMENT PLAN

ADAMS SCHOOL
LEXINGTON, MASS.

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VOL. CXI JANUARY 17, 1917 No. 2143

HELPING THE STUDENT

WE ARE informed that the Washington Chapter of the American Institute of Architects has turned over its library to the Department of Architecture of George Washington University and that the gift was made good by an additional donation of two hundred dollars for further purchases. There is every reason to commend co-operation of this sort. A chapter of the Institute has not much use for a library of its own, unless a comprehensive system of collecting and of lending books be established. In fact, in localities in which the resources of an architectural library are not already available, such an arrangement might be found distinctly advisable. In Washington, however, the chapter saw a greater duty in contributing both its books and its funds toward the encouragement of growing minds in preparation for the profession, and no nobler purpose can be found for the ambitions of any professional body than that of making the uphill road of the apprentice easier by improvement of the available equipment for study.

In the absence of the actual monuments of the past, and, especially, because of our great distance from the source of our stylistic inspirations in architecture, we constantly experience the need for books and plates—for essentially good books and accurate plates. Such items of equipment are as necessary to the student as his T-square, and the effectiveness of a good book is enhanced by the continuity of its good impression from man to man. In the libraries of our older schools, at Columbia or at Technology in Boston one encounters war worn veterans, scarred by many an eager search for *parti* for ideas, for concrete conceptions, and stained by the blot and spatter of many a *charrette*. Such books gather an added dignity by virtue of their continued use, and, more decidedly, by virtue of their perennial virility and inspirational value. All schools, all ateliers, all drafting rooms where men are brought together to work out an occasional *projet* are in need of such aids to their work. We ourselves have seen in various parts of this architecturally needy land groups of young draftsmen struggling against odds, that we had not the heart to tell them were insuperable—an entire lack of books, and that even in the largest offices of our smaller cities. We know of schools where the history of architecture is taught with a paltry hundred or two of lantern slides, the history of painting or of sculpture with not a single photograph to aid, and, worse yet, the all-embracing subject of design is attempted with perhaps one or two books, which must serve every possible purpose almost without regard to subject matter. Nor is this all: in such places the deficiency in equipment is coupled too often with immature or entirely inadequate instruction. The fervor and eagerness of the young minds call forth sympathy alone as their reward, definite instruction resolves itself into criticism of drawings only and a dallying with technical details of draftsmanship, and the response to the call for real teaching of principles, of planning, of the why and how of the greatest of the arts is not forthcoming.

Our initial text in a minor key, it seems, has developed into the burden of a

chant of woe. Architectural teaching in schools is nearly two score years old in the United States. There is no lack of appreciation of the subject in the larger cities; there is a lamentable inclination in the smaller cities and in the country beyond, to regard the architect as a luxury that may be dispensed with if a good builder is at hand.

A warm encouragement of schools and ateliers by Institute chapters throughout the land will remedy this serious drawback to our architectural growth. And by this encouragement, we do not mean resolutions and recommendations, and suggestions by committees not acquainted with the needs of the educational machine. We mean concrete encouragement in the form of material assistance—cash, if possible, but, above all, books, always books. Books are the great and essential beginning of the greatest helpfulness for the opening mind. They will make good many a deficiency in equipment of other kinds; they will help to condone even serious gaps in the calibre of a critic or *patron;* they will proclaim the splendid lesson of the past, and their inspiration will be constant and unfailing. If all chapters of the Institute were to set themselves this ideal of definite helpfulness, and realize the ideal to the extent of an annual appropriation toward the purchase of books for the school or atelier of architecture in their cities or districts or states, a world of good would be accomplished toward the advance of architectural teaching, toward the rise of public taste and appreciation, and toward the elevation of the profession. The example of the Washington chapter of the Institute is significant in this respect.

ENCOURAGING THE PRODUCTION OF GOOD ARCHITECTURE

PERHAPS the time will come when the average citizen in this country will appreciate the inherent, as well as the commercial value of good architecture, to an extent that will render unnecessary the offer of any special prize or distinction to induce him to cooperate in the production of architecturally meritorious buildings. At present, however, anything approaching conviction on the part of the general public that excellence of design possesses both money and art value can scarcely be said to exist, and as a consequence the use of artificial means for securing the desired results seems not only justified but desirable.

One method of accelerating the artistic impulse, and one that would seem to offer great possibilities, has been adopted in the South American city of Buenos Ayres. That municipality exempts from taxation each year the most beautiful building erected during the preceding twelve months, and in addition awards a medal to the architect. A more direct form of encouragement, or one that would possess a greater appeal for the average owner, it would be difficult to devise. It is possible that the decoration of the architect may be unnecessary to the success of the plan, but there are few of us, after all, who are superior to a feeling of gratification when our efforts receive official recognition, and doubtless it is with the idea of taking cognizance rather than paying a reward that the medal is bestowed. On the whole, it would seem that the plan might well receive careful consideration by municipalities in this country.

MAIN DINING ROOM
MINNESOTA STATE PRISON GROUP, STILLWATER, MINN.

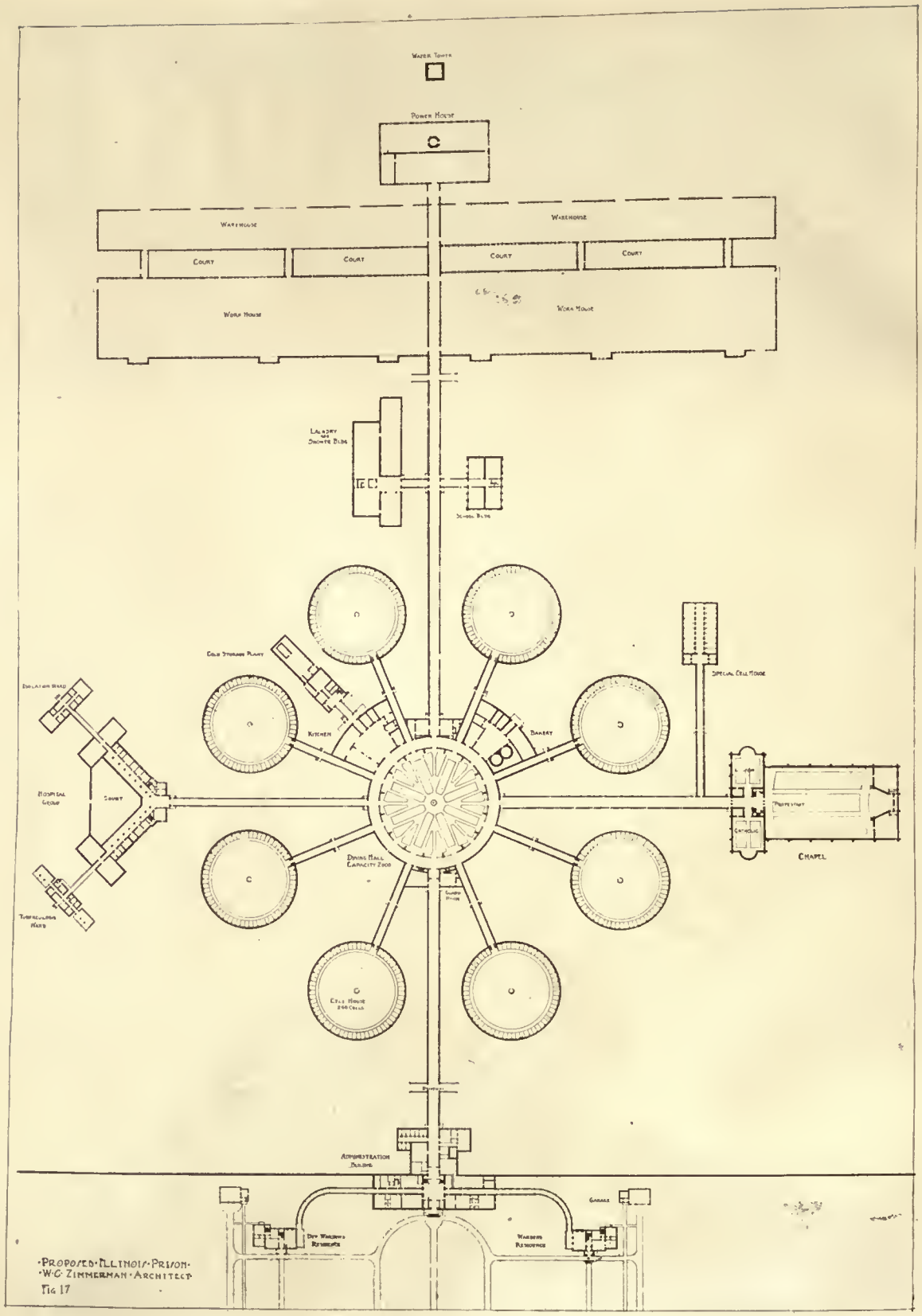
EVOLUTION OF PRISON PLAN

(*Continued from page* 40)

are in the rear. The administration group stands at the front upon the axis with the residences of the warden and deputy either side. Mr. Zimmerman has contrived to get the maximum light and air and has recognized the reformatory effect upon the prisoner of not feeling that he is constantly watched. To this end and for the further end of economy he has adopted the Panopticon cell house with a central conning tower. By means of glass cell fronts the entire interior of every cell is visible from the conning tower at all times. The guard controls the lights and doors of the cells, but is never seen by the prisoners.

A later prison conceived upon the circular plan and with many features to recommend it is that designed by Architects Schriber and Beelman of Toledo for the new Ohio State Penitentiary at London (Figs. 20 and 21). Here the administration is at the front on the main axis. Leading from this is a causeway or corridor to the great circular cell house, a building 500 ft. in diameter. Unlike Mr. Zimmerman's plan, which has outside windows protected with bars as well as a skylight, this cell house has no windows in the outside walls at all, the light being gained entirely from the skylights. By means of very heavy glass walls, 1½ in. thick, reinforced with steel, the architects propose to do away entirely with the

FACTORY AND WAREHOUSE
MINNESOTA STATE PRISON GROUP, STILLWATER, MINN.
MR. CLARENCE H. JOHNSTON, *ARCHITECT*



PROPOSED ILLINOIS STATE PRISON

MR. W. CARBYSS ZIMMERMAN, *ARCHITECT*

prison bars, which is a very laudable attempt. A central recreation court 200 ft. in diameter, supervised by a central guard, occupies the center of the cell house. The hospital and the electrocution buildings communicate with the cell house either side by means of causeways, while the manufacturing and service departments, all housed in another great circle, adjoin the cell house at the rear. This building is 1000 ft. in diameter and has a recreation court in the central portion with a diameter of 800 ft. This court is open at the top, while the building has an eave projection of some 6 ft. to prevent the prisoner from scaling the wall. All light comes into the rooms by means of the glass walls on the inner side, there being no windows at all in the external walls. Here again one guard commands full view of the entire building from a central position in the recreation court. The circulation facilities are cared for by a 15-ft. corridor

FIG. 23—BIRD'S EYE VIEW, NEW MINNESOTA STATE PRISON

around this building just inside the outer walls. This is never open to prisoners unless under guard, so that in the whole institution there are no prisoners in contact with outside walls. This permits the elimination of the traditional prison walls, the buildings themselves being the

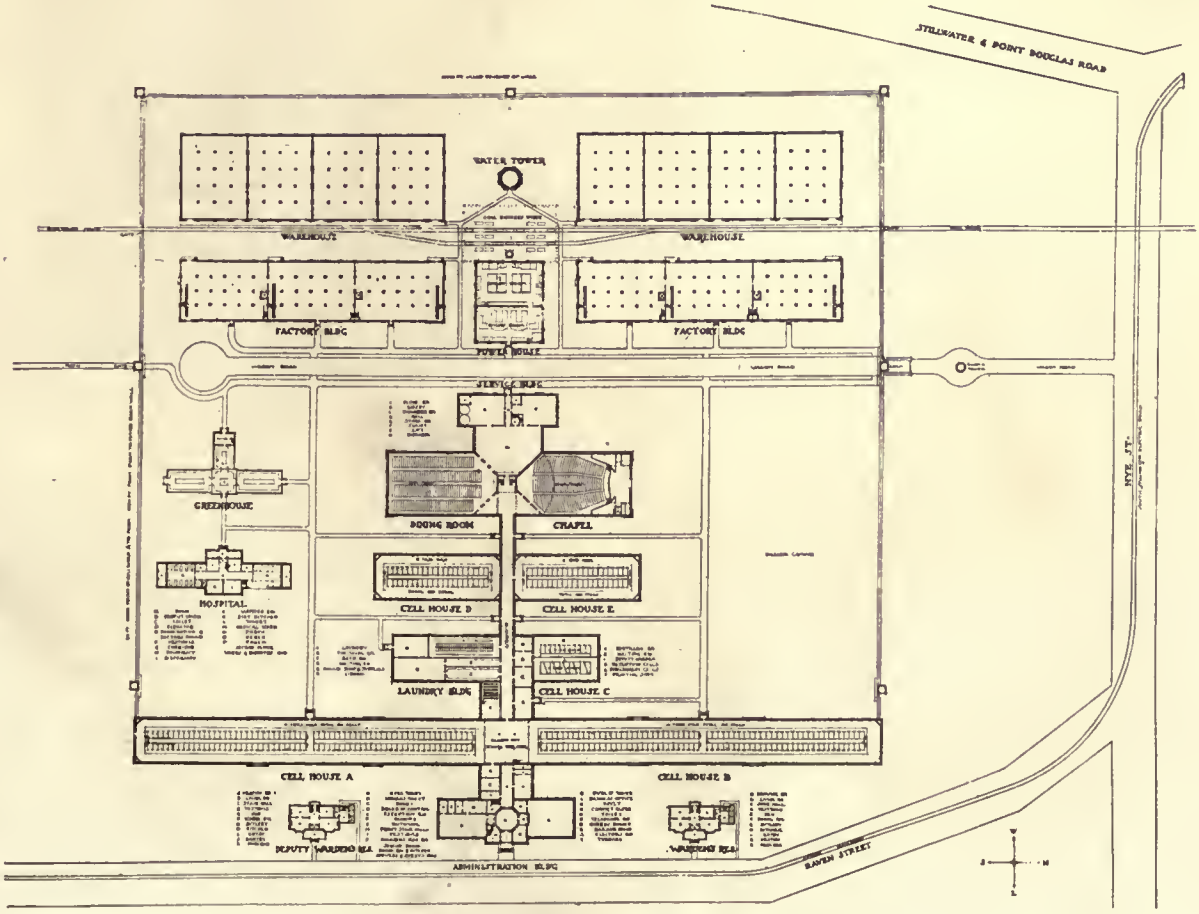
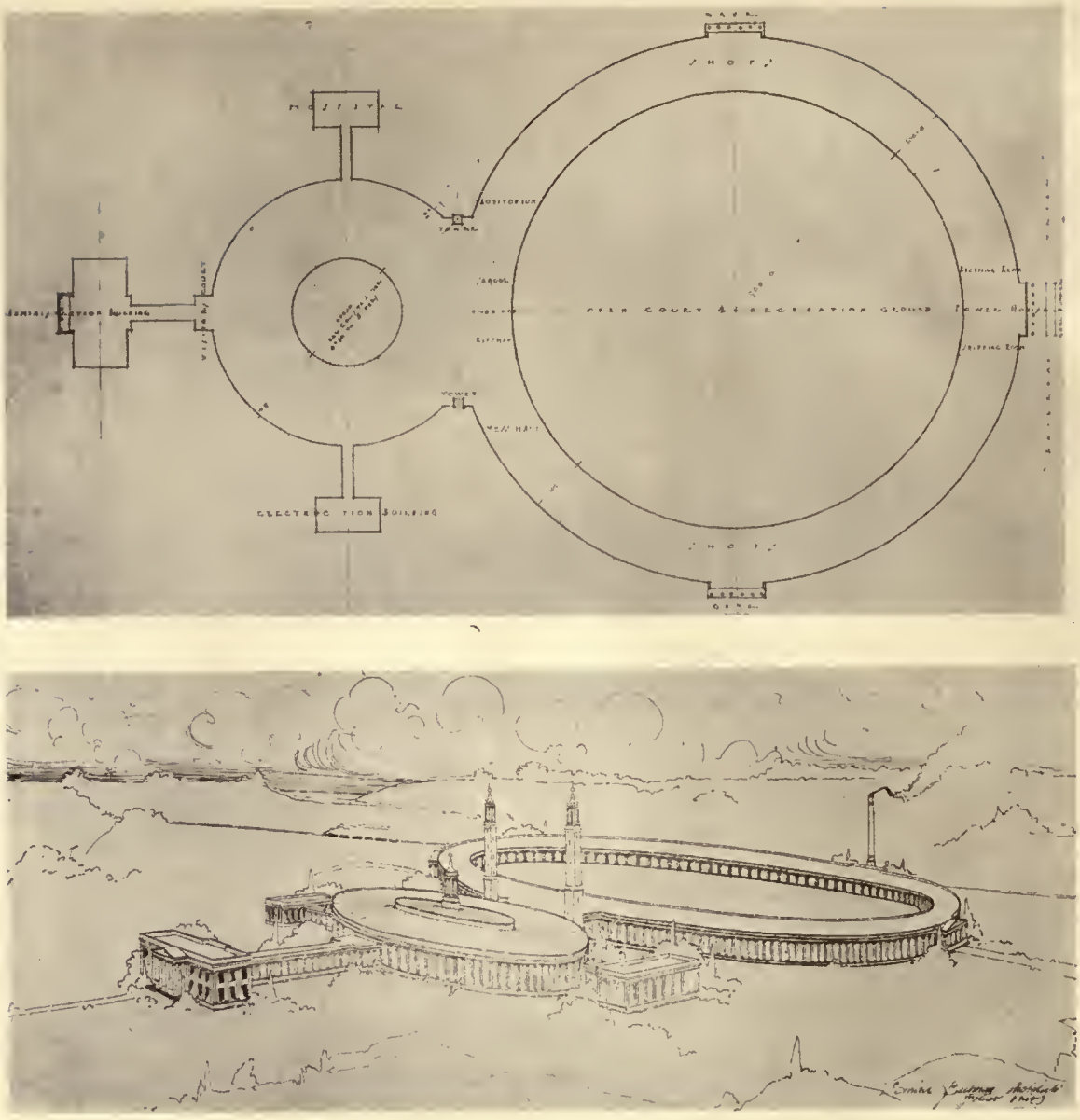


FIG. 22—GROUND PLAN OF THE NEW MINNESOTA STATE PRISON



FIGS. 20 AND 21—PROPOSED DESIGN, OHIO STATE PENITENTIARY
MR. CLAUD W. BEELMAN, *ARCHITECT*

walls. This admirable plan as well as Mr. Zimmerman's failed of adoption.

In closing, a few words concerning the architectural expression of prison buildings will not be out of place. Most of the prison architecture in America has been conceived in the heavy, embattled, castle-like style of Pennsylvania Eastern Penitentiary; heavy towers, narrow slit windows, smacking strongly of the dark ages, are features. As a usual thing they are not appropriate or efficient. Messrs. Zimmerman, Johnston, Schriber and Beelman have striven to remedy this evil and it is to be hoped that future designers will disregard the precedents that have been set in the past, profit by these latest expressions and give the prison house as light and airy an expression as is consistent with good and safe construction.

The author desires to acknowledge the assistance of Architects W. C. Zimmerman of Chicago, Claud W. Beelman of Toledo, Wardens Allen of Joliet and McKenty of Pennsylvania Eastern Penitentiary in the preparation of these articles.

The Artistic Business Sign

The importance of a suitable environment for a business, which is related to the artistic in furnishings, has been recognized with more or less unanimity by those engaged in the decorative trade. There is, however, room for improvement in the character of the signs displayed

by many of the biggest of our decorative firms.

Why should not the form of lettering, or the firm name and the plate on which it is carried, be a striking example of the kind of work that the firm is capable of doing?

As an example of unusual character shown in a business sign, we show herewith an illustration of the sign of a firm of New York architects. A presentation of a business name in a way that is as dignified as it is unusual.

—*The Upholsterer.*

BOOK NOTE

GEORGE EDMUND STREET. Unpublished notes and reprinted papers, with an essay by Georgiana Goddard King. Full cloth, 5½x9 in. New York: The Hispanic Society of America.

This book is, first of all, a memorial to Charles Edmund Street, who in the late '70's was president of the Royal Institute of British Architects.

The unpublished notes and reprinted papers are interesting and intimate memoranda of various tours made by Street, always with a view to the enlargement and improvement of an already profound knowledge of ecclesiastical architecture.

The reader will find his interest divided between the well written memorial that prefaces the "notes," and the "jottings" of a most observant man whose place in architecture and as an active layman of the church was one of undisputed prominence.

Street was born in 1824 and died in 1881. He lies buried in Westminster Abbey.

It will be interesting to briefly review the life of a man whose high position as an architect and whose lovable qualities as a Christian gentleman served to mark him as a leading member of the profession of architecture.

The memorial, referring to the fact that Street left school at the age of fifteen, and had none of the, in that day, supposed-to-be-indispensable advantages of a university training, states: "Instead of culture he has energy, instead of urbanity he has self-control, instead of classical he has professional reading behind him."

His unusual energy is demonstrated by the fact that he had a working mastery of French, German, Spanish and Italian, and these things he accomplished at such spare moments as he could borrow from the study of architecture, in the practice of which he was engaged.

Shortly after leaving school Street was articled to an architect in Winchester, and here at the wonderful cathedral he commenced his study of church architecture past and present, making many studies of the cathedral, at whose reli-

gious services he was a steady and most devout attendant.

In fact, throughout his life he pursued his study of ecclesiastical architecture from the double motive of a strongly developed religious tendency and a love for that form of architecture that found its best development in the religious structure.

Street's biographer, referring to these characteristics, writes as follows: "Energy and beauty in him were mingled in unusual measure, and he found expression in active more than in abstract creation: in loving landscape and sketching it, in hearing music and singing it, in building Gothic churches and restoring them."

Reading this memorial and the "notes" is one of the best forms of architectural education. We are led to an intimate knowledge of these characteristics and mental processes that contributed to a great man in his profession, and we may be able, in some measure, to so regulate our own lives as to achieve a better and a higher purpose.

A temperate and austere life permits of the greatest mental activity. And, thus, we find that Street, combining both of these habits, was able to accomplish an amount of work that seems Herculean in view of our present methods.

To quote from the memorial: "His invention was inexhaustible; he designed not only all the moldings for his churches, and all the delicately various, not only reredos and pulpit, baldachin and font, and once a whole book of organs, but equally as a matter of course the windows, the stalls, the iron work and the very altar cloths. About this time he painted the ceilings to some of his churches after Fra Angelico, from his own designs."

It is aptly stated that Street's life "falls into such periods as Ezekiel counted—a time, and a time and half a time."

The earlier time to church building and the writing of those works that have survived him—*Brick and Marble in Italy* and *Gothic Architecture in Spain*.

The next time, also covering a period of approximately a decade, was given up to the great commissions with which he was entrusted—the Law Courts, the Nave of Bristol Cathedral, the rebuilding of the Cathedral at Dublin and restoring that at York.

Finally the last half, a period when he had not attained the age of sixty, he achieved those honors at the hands of his professional brethren that elevated him to the council of the Royal Academy and, as stated at the outset, his election as president of the R.I.B.A.

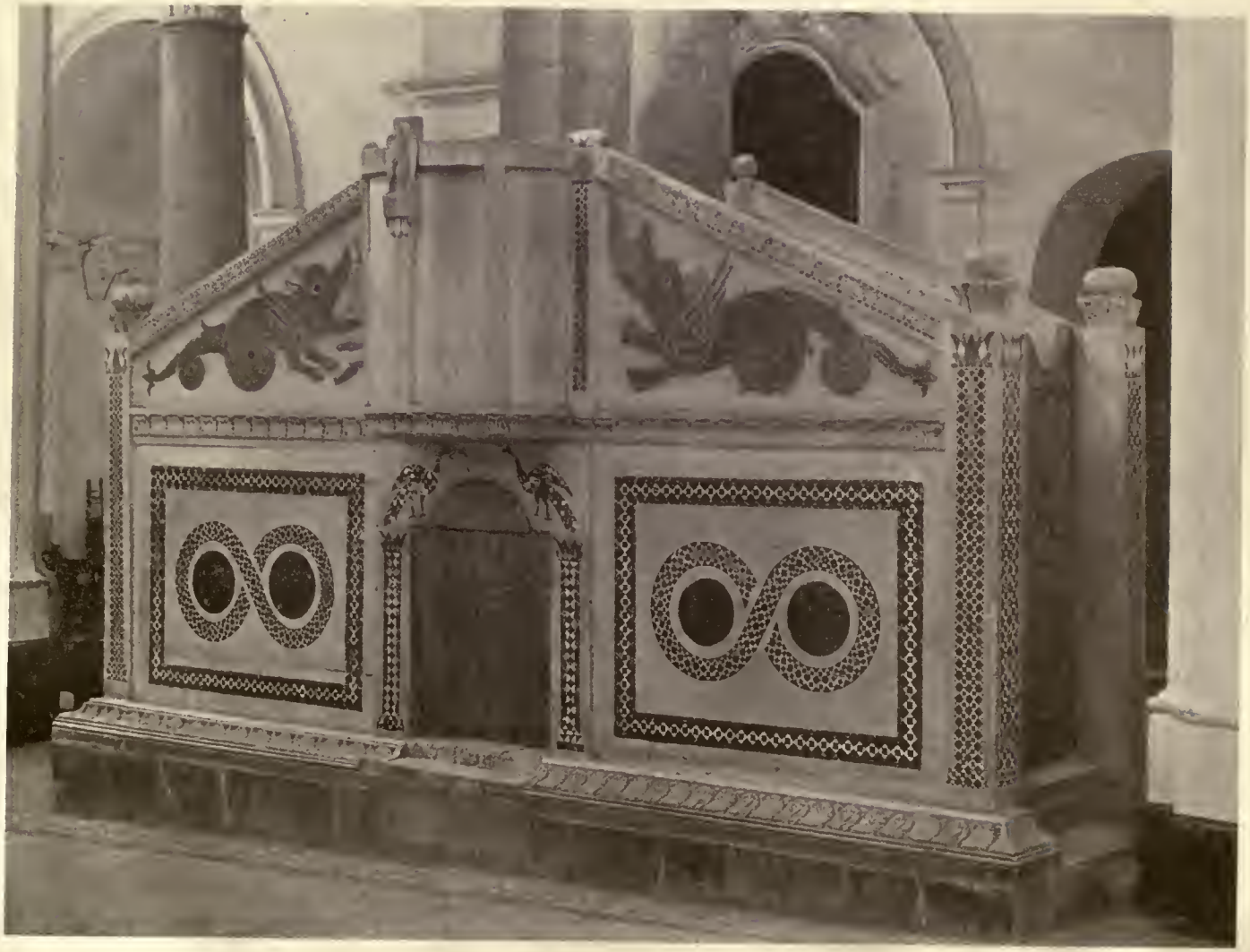
Certain names in every art are common knowledge; others perhaps equally great but of less spectacular appeal are lost in the obscurity of a busy age. It is well to rescue such names from what might eventually become oblivion. In the preparation and publication of this book a desirable end is served, and a volume that will be of considerable value in the architectural library, particularly that of the student, has been made available.

To Preserve a Texas Landmark

It is gratifying to be able to record instances where appreciation of old or historic buildings has served to preserve and restore them for educational purposes. One of the latest to be brought to our attention is that of the historical land office building in Austin, Tex., the oldest state structure, which is to be preserved and converted into an historical museum. This good result has been secured through the activities of the various historical and patriotic organizations in the State of Texas.

Personal

Messrs. Maenner & Senne, Central National Bank Building, St. Louis, Mo., announce a dissolution of partnership. Mr. Senne will practice under the name of J. H. Senne, 923 Central National Bank Building. Mr. Maenner will take into partnership Mr. N. C. Davis, formerly a practising architect at Neosho, Mo. They will practise under the name of Maenner & Davis, with offices at 522 Central National Bank Building.



THE SMALLER PULPIT (BYZANTINE-ROMANESQUE –12TH CENTURY), CATHEDRAL, RAVELLO, ITALY

THE AMERICAN ARCHITECT

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EX-GOVERNOR PEASE'S HOUSE

EARLY ARCHITECTURE IN TEXAS

By SAMUEL E. GIDEON

Associate Professor of Architecture, University of Texas

ONE does not expect to find many examples of good architecture among the houses of early Texas towns, and by Texas towns I do not mean San Antonio with its Missions of the early eighteenth century, but the towns of the Republic of Texas, afterward the State of Texas. This was the writer's impression until a careful survey of the many early towns brought to his attention numerous splendid examples. These were designed, not by architects, but by master builders, who had a fine sense of proportion and an excellent knowledge of the details of the "Classic Revival" which reached Texas much later than the older States.

The capital city of Austin has many good examples of early architecture. The earliest and the only survival of the days

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THE NEIL-COCHRAN HOUSE

of the Texas Republic in that district is a house built for the French Embassy.

It may not be amiss to briefly recall a bit of Texas history. Texas had a checkered career. She served under the flag of France, then under the flag of Spain, then under Mexico, asserting her independence as a republic in 1836, and finally being admitted to the Union in 1845.

In 1840 France recognized the Republic of Texas and sent, as Ambassador, Monsieur Saligny, who arrived in Austin in June of the same year. M. Saligny, later Count Saligny, a gay young bachelor, built the Embassy above referred to on a hill, then some distance away, overlooking the town, the exact date of its erection is not known, but is believed to be prior to 1842. This building, the oldest now in Austin, is remarkably preserved.

The house is simple in plan—two rooms on either side with a wide hall in the center. A plain but dignified stairway leads from the hall to the attic, which served as servants' quarters. Each room contains a fireplace with stone hearth.

The rooms are large and airy. The walls of the front rooms were covered with

THE HAUNTED HOUSE

THE SWISHER HOUSE

brown burlap and the back rooms with white canvas. The walls of the hall have their original covering of matched boards painted white. The doors, which are all tall and thin and much paneled, swing on hand wrought iron hinges secured with hand wrought nails. The windows were originally casements, but these have been changed for double hung windows, and the former plain batten shutters, a protection against the Indians, are replaced by outside blinds.

A kitchen, now removed, was a separate building out-of-doors.

The early settlers of Texas were not the unlettered type they are generally believed to have been. Newcomers were amazed at curious contrasts they found on the frontier. An early traveler writes: "You are welcomed by a figure in a blue flannel shirt and pendant beard, quoting Latin poets . . . You will see fine pictures on log walls; you will drink coffee from tin cups on Dresden china saucers. Seated on a barrel, you will hear

HALL—THE FRENCH EMBASSY

Beethoven's Symphony on a rosewood piano. The bookcase may be half full of books and half full of potatoes."

In 1853 a family named Raymond built what is now known as the Raymond House. It was the first large house in the colonial style built in Austin. Many similar houses followed.

The photograph of the elevation gives an idea of the lines and proportions of this stately old brick, colonial home. The columns, which are of wood, are pure Greek Ionic. The rails leading from the central columns are of later date. The balcony rail here is different from all the other houses of this type, being made up of interesting, intersecting curves instead of

THE FRENCH EMBASSY

triangles, as the others are. The house has very large rooms and halls.

Shortly after the Raymond House the Swisher House, as it is called, was built. This is perhaps the most interesting of this group of houses, because it has not been restored and because of its excellent detail, the bold relief of carvings of the capitals, the graceful entasis of the columns, the elliptical section of the channels of the column and the exquisite refinement of the marble bases.

The Pease House, quite similar to the Governor's Mansion, was built about the

INTERIOR—THE FRENCH EMBASSY

same time, the designer and builder being Mr. Cook. It was built for a Mr. Shaw, who had it erected for his intended bride. The lady, however, proved fickle and never became Mrs. Shaw, so Mr. Shaw sold it to Governor Pease, in whose family it still remains.

The detail of this house is more delicate than that of the Governor's Mansion and there has been less restoration, but the strips nailed across the columns and the awning mar the simple beauty of the porch.

The Pease House is unlike the others shown, in that it is still out of town and

THE SHELLEY HOUSE

surrounded by extensive grounds, which give it an air of old-time seclusiveness and dignity.

The Governor's Mansion, built about 1855, is another one of these interesting examples, but less refined in its detail than the Swisher House. It is located on an elevation not far from the Capitol, and because it is the Governor's Mansion better care has been taken of it than the others. Unfortunately, ridiculous iron flower pots and concrete, labeled carriage

THE NEIL-COCHRAN HOUSE

blocks detract from the dignity of the place.

A portico in the Doric style is seen on the Shelley House, built about the same time as the Governor's Mansion. The capitals are somewhat archaic, but graceful in contour. A strange feature of this.

THE RAYMOND HOUSE

house is that the portico is on the rear, now facing an alley. Originally the lot sloped a considerable distance to another street.

THE GOVERNOR'S MANSION

The general lines of the Neil-Cochran House are similar to others shown, but the capitals here are Doric, and it is the only house of this type built of stone.

The Great Mistake

The great mistake made by the young architect at the beginning of his career is usually his failure to recognize that the world in which he lives is not supremely interested in Architecture written with a capital letter, and has not the time or inclination to make a close and intimate examination of the architect's qualifications. On the other hand, everyone enjoys pleasant and congenial companionship in daily life, and the architect who has lived a self-centered life of absorption in one pursuit is frequently a dull or boring companion in society. His natural anxiety as to his own future will, unless he is careful, operate directly against his chances of success, and when he obtains work he should remember that it is more to his advantage to have converted a client into a friend than to have pleased himself with the design of a building which, in any case, he will regard as a tentative effort in the future. We do not mean that he should be as wax in the hands of his client, or fail to do his utmost to produce good work, but he should avoid the mistake of over-estimating the importance of what he is doing.—*The Builder.*

A State Licensing Law in Indiana

A bill proposing to regulate the practice of architecture in the State of Indiana has been drawn by a committee of the Indiana Chapter of the American Institute of Architects.

The bill provides that the Governor shall appoint a state board of examiners of architects, to be composed of five members, one of whom is to be a member of the faculty of Purdue university, one to be a consulting engineer and the other three Indiana architects of at least ten years' experience. The secretary of the board, one of the members, is to receive a salary not to exceed $1,500 annually, and the other members receive $10 for each day in the state's work.

The board would be empowered to adopt regulations for the examination of applicants for license to practise architecture. A fee of $15 is to be paid by each applicant for examination. An additional fee of $25 would entitle the successful applicant to obtain his license to practise architecture. This license would be in effect for one year and would be renewable for $5 annually. Affidavits, to be filed within six months, before the state board, that an applicant was engaged, and in good standing, in the practice of architecture at the time of the passage of the act, would entitle all such applicants to licenses without examination. The bill does not provide for the licensing of corporations, but merely for the licensing of individuals.

The right is granted the board to revoke licenses for dishonest practice, incompetency, recklessness and other causes, the unanimous vote of the state board being necessary for such revocation. After six months from the time the proposed act goes into effect those who practise without licenses would be subject to fines of from $10 to $500 for each offense.

THE OPERATION OF RESIDENTIAL SEWAGE DISPOSAL PLANTS IN ACTUAL PRACTICE

By WALDO S. COULTER*

IF EVERY designer of sewage disposal plants could be closely associated with the operation of his plants for a year or more after each was placed in service, many defects which are now perpetuated in successive designs would become less popular.

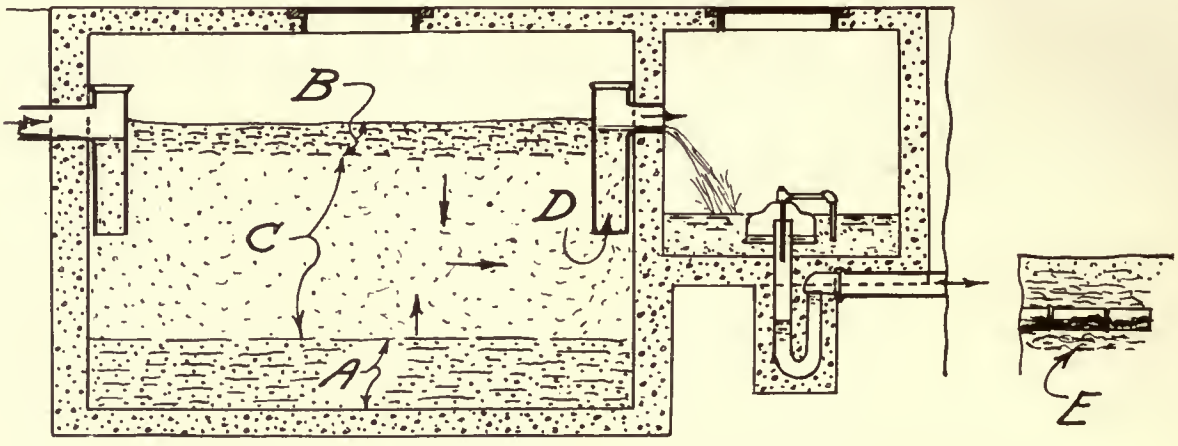
Although this statement is of general application, reference is here made more particularly to the residential plant which is notoriously overlooked once it is placed in operation.

An examination of such plants, as ordinarily constructed, will usually reveal a state of affairs entirely incompatible with the claims commonly made for them.

If the reader wishes an ocular demonstration, let him observe the sewage discharged from a single-story septic tank after it has been in continuous operation for a few months. The tank effluent will be seen to contain large quantities of suspended matter. Collect a sample of the effluent in a glass jar as it falls from the outlet opening and observe that most of the suspended matter settles quickly to the bottom of the jar. Now why should these particles not have settled to the bottom of the tank in a similar manner and have remained there?

Next observe the contents of the septic tank itself. If the surface be not too thickly coated with scum, gas bubbles will be seen to rise plentifully through the sewage and detached masses of sludge will appear at the surface from time to time.

The rising gas and sludge are caused by the putrefaction of the deposits on the tank bottom. Their passage upward through the sewage tends to disturb it and prevent effective sedimentation. As a result, some of the settleable suspended matter in the raw sewage never settles but is carried through to the outlet, while particles of gas-buoyed sludge are lifted from the floor of the tank and carried out



LONGITUDINAL SECTION THROUGH A SINGLE-STORY SEPTIC TANK

A. Putrefying deposits on the tank bottom.
B. Scum composed of matches, feces and other objects of low specific gravity; solids lifted from the deposits on the tank bottom by entrained gases generated during putrefaction at "A," and such unsaponified fats as congeal and rise to the surface upon becoming chilled.
C. Rising gas bubbles from putrefying deposits at "A"; matter descending from "B" after disintegration or liberation of entrained gases; sewage matter in act of settling or which is prevented from doing so by the disturbances occasioned by ascending gas bubbles and ascending and descending particles and is passing through the tank from inlet to outlet.
D. Sewage flowing from the tank and carrying with it (1) unsettled sewage matter, (2) gas-buoyed sludge and scum, (3) saponified fats and a considerable percentage of the unsaponified grease.
E. Tile field, with accumulations of sewage matter "unloaded" from the tank, clogging the tiles and soil pores and preventing purification.

*Of Hansen & Coulter, Consulting Engineers.

in the effluent. No arrangement of scum baffles or increase of the cross-section will prevent this unloading of a single-story septic tank after it "ripens."

This type of tank is commonly used in residential sewage disposal plants and there is probably one in your neighborhood that you can readily observe.

If there is, and the owner will permit you to do so, take a shovel and uncover a few of the tiles in the subsurface disposal field with which it is probably equipped. If the plant has been in continuous operation for several months immediately preceding, you will find the tiles and the surrounding soil more or less clogged with sludge. This is an accumulation of the matter you observed passing out at the tank outlet. If the system is operated during the summer season only, and the disposal field has a chance to recuperate during the remainder of the year, aerobic bacteria may perhaps oxidize the accumulations in the field by the time each operating period comes around. But if operation continues throughout the year, look out for trouble ahead.

In case the soil is very porous it will stand much abuse and the sewage will be absorbed for a long time by outlying unclogged portions, but if the soil is at all heavy, the sewage frequently appears at the surface or in adjacent low areas.

Should sand filters or contact beds follow the septic tank, instead of sub-surface disposal fields, note the deposits unloaded on the surface of the sand or within the body of the bed.

The oxidation processes in a clogged disposal field are of course very imperfect. Incomplete oxidation permits intestinal bacteria to live for some time in the field. There are well accredited instances where bacteria, under such conditions, have grown slowly through the soil, with the sewage deposits, to points 200 feet distant from the distribution tiles.

It is frequently stated that the sludge deposited in a single-story septic tank is so effectively reduced by bacterial action that it is not necessary to clean the tank more frequently than once in a year or even two years. That a limited reduction is so effected in such tanks is true, but the principal reason why sludge deposits do not accumulate in the septic tank beyond a certain point is because they are "unloaded" into the tank discharge. Simple observation will confirm this statement. The sludge you fail to find in the tank has mostly passed into the tile field.

One remedy for this condition is frequent cleaning of the tank. Septic action develops in about 3 weeks if the weather is hot, and in about 6 to 8 weeks during the winter. Such frequent removals of undigested sludge are impracticable for most residential plants.

The remaining remedy is to overcome the defects by proper designing. Unfortunately the design of residential plants has not kept pace with the general advance of sewage disposal. They are commonly designed along certain established lines, and it is supposed to be no great feat to install a residential plant.

No one knows better than the architect, who is the party held responsible by the owner for the several features of a development, that sewage disposal chickens have a habit of coming home to roost. The custom of turning over the sewage disposal work to the lowest bidder, allowing him to furnish his own design as an incidental feature of the transaction, is not calculated to keep the poultry off of the architect's front fence.

A Public Comfort Station Bureau

At one time and another, various cities have endeavored to incorporate as a unit of their civic improvements public comfort stations. As these utilities are as a rule placed below the surface, and their approaches sometimes simply kiosks, or small structures, they have not been considered important problems for the architectural designer.

At the same time there is, and always has been, a very great demand for these comfort stations. It is interesting to note that in a very decided movement now going forward, the reason urged for a larger installation in both town and country is, that with the possibility of a prohibition enactment in many states the saloon, as a comfort station, will have ceased to be available and the cities should seek to supply their place.

In a pamphlet issued by the Public

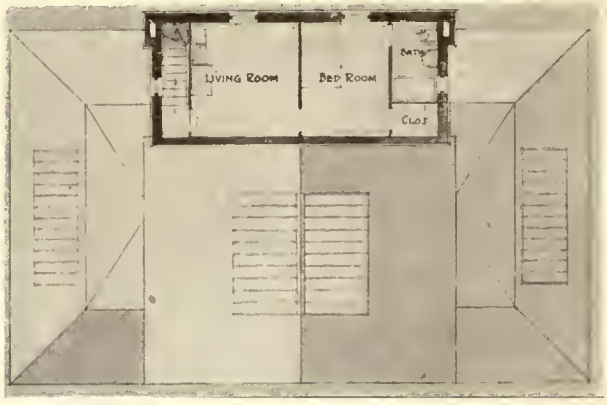
FRONT ELEVATION

Comfort Station Bureau, 261 Broadway, N. Y., Mr. J. J. Cosgrove, the Director, states:

"It is the duty of the public to take care of the public. For a number of years the public has been shirking its duty, thereby imposing a public burden on private enterprise. This was forcibly brought home to the city authorities of Portland, Ore. Portland went "dry" and the sudden flood of people the closing of the saloons drove to the hotels for accommodations, forced the hotel owners and managers in self-defense to organize and demand of the city authorities the building of public comfort stations."

This, and similar instances that prove the necessity for a much needed public utility, have led to the organization of the Bureau referred to.

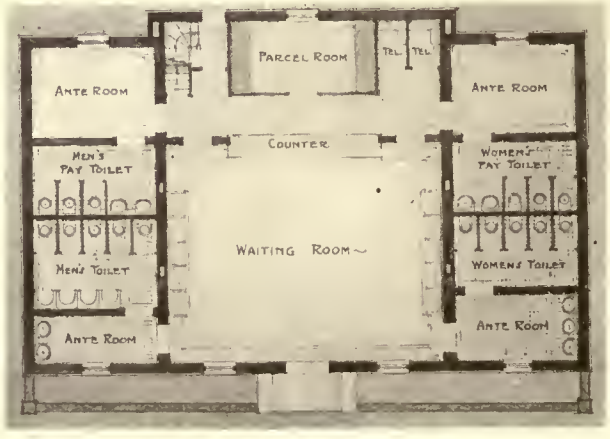
The Public Comfort Station Bureau, co-operating with the American Automo-



UPPER FLOOR PLAN

bile Association, National Highways Association, National Old Trails Road Association and chambers of commerce in all parts of the country, is putting through a country-wide campaign to provide these much needed public conveniences under the provisions of the American plan.

The plan and elevation shown here-



FIRST FLOOR PLAN

with is the National Highways Public Comfort Station, designed by Mr. Ernest Flagg, with the view of providing a building which would be distinctive, yet simple in outline, thorough in all its appointments, sanitary, promote a good

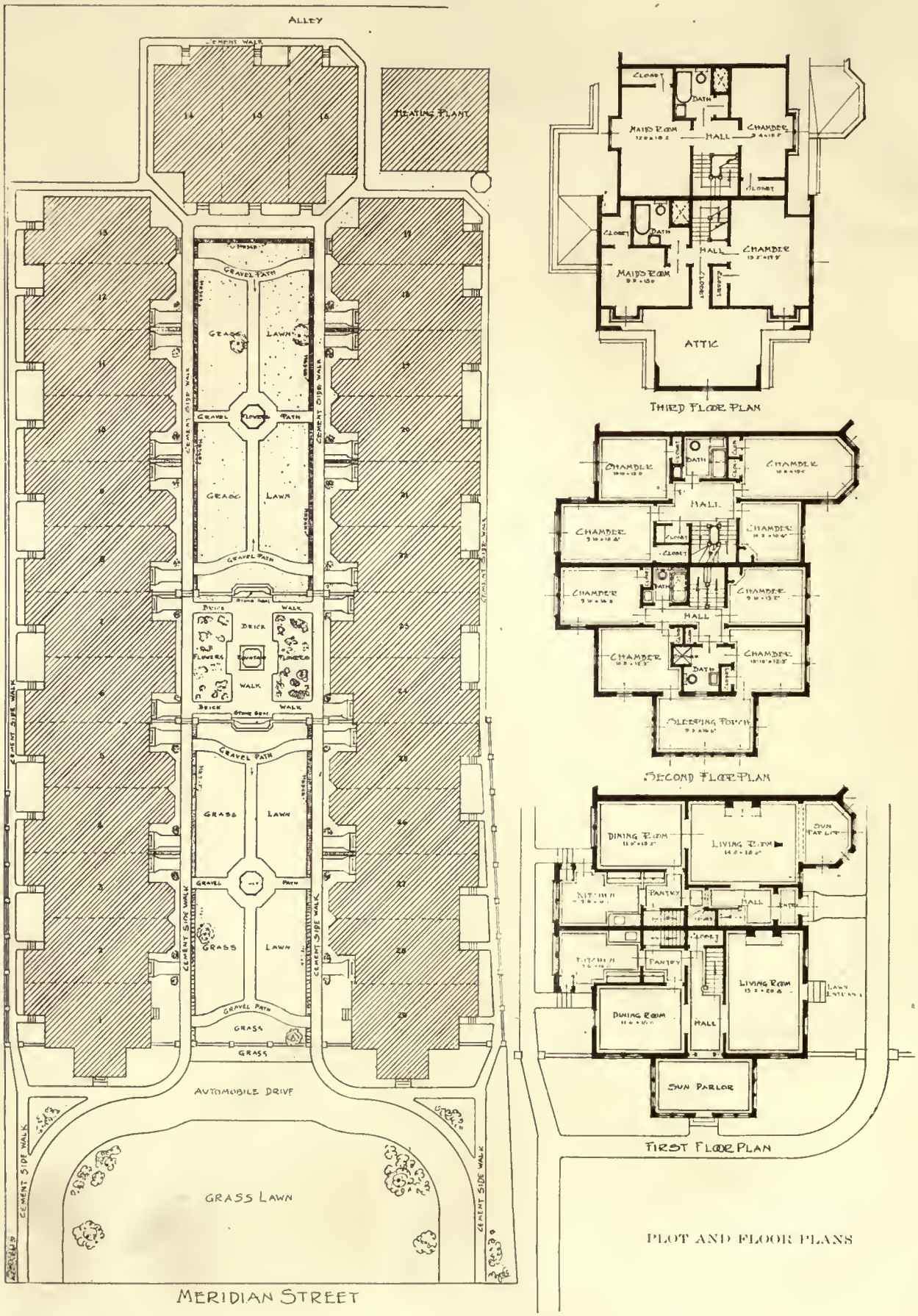
(*Continued on page 59*)

5-6'

VIEW IN COURT LOOKING WEST

HAMPTON COURT, INDIANAPOLIS, IND.

MESSRS. GEORGE, MacLUCAS & FITTON, *ARCHITECTS*



HAMPTON COURT, INDIANAPOLIS, IND.

MESSRS. GEORGE, MacLUCAS & FITTON, *ARCHITECTS*

REAR BUILDING—GROUP OF THREE HOUSES

HAMPTON COURT, INDIANAPOLIS, IND.

MESSRS. GEORGE, MacLUCAS & FITTON. *ARCHITECTS*

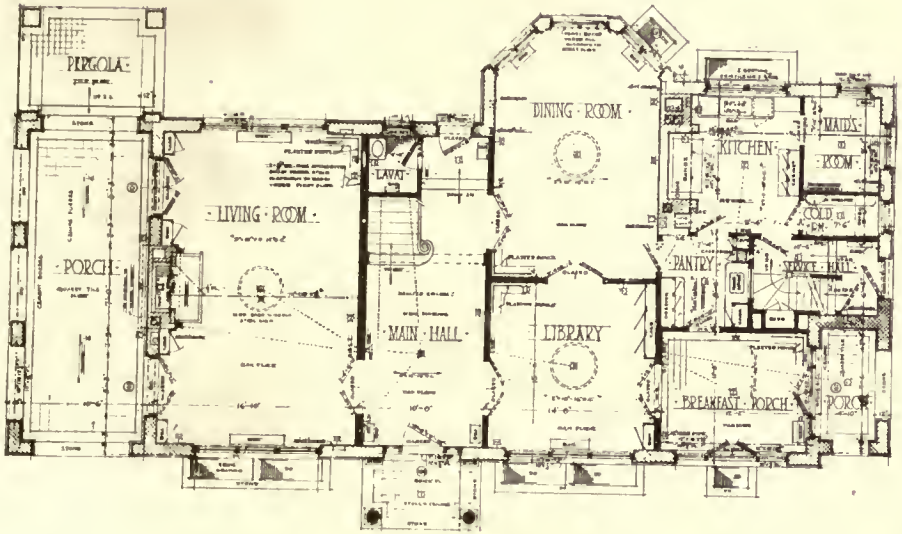
GROUP DETAIL IN COURT

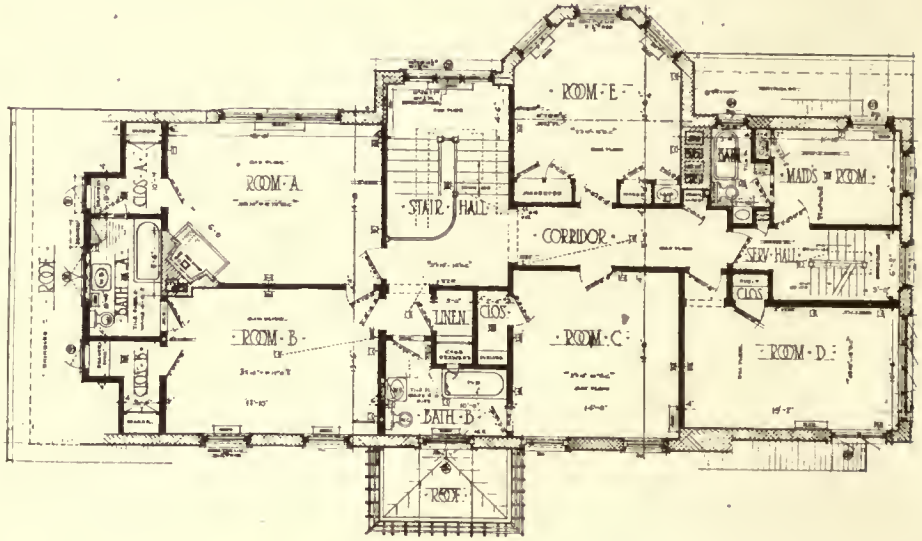
HAMPTON COURT, INDIANAPOLIS, IND.

MESSRS. GEORGE, MacLUCAS & FITTON, *ARCHITECTS*

HOUSE OF FRANK C. TEAL, ESQ., DETROIT, MICH.

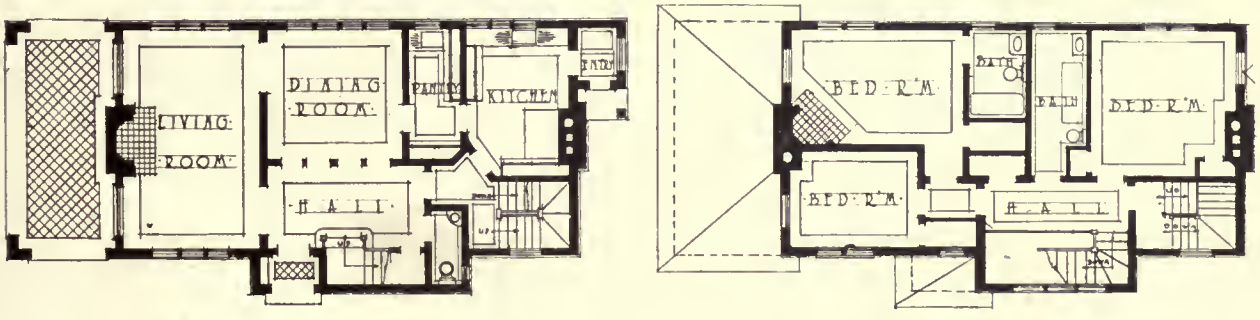
MESSRS. PRESTON, BROWN & WALKER, *ARCHITECTS*





HOUSE OF MR. FRANK C. TEAL, ESQ.,
DETROIT, MICH.

MESSRS. PRESTON, BROWN & WALKER, *ARCHITECTS*

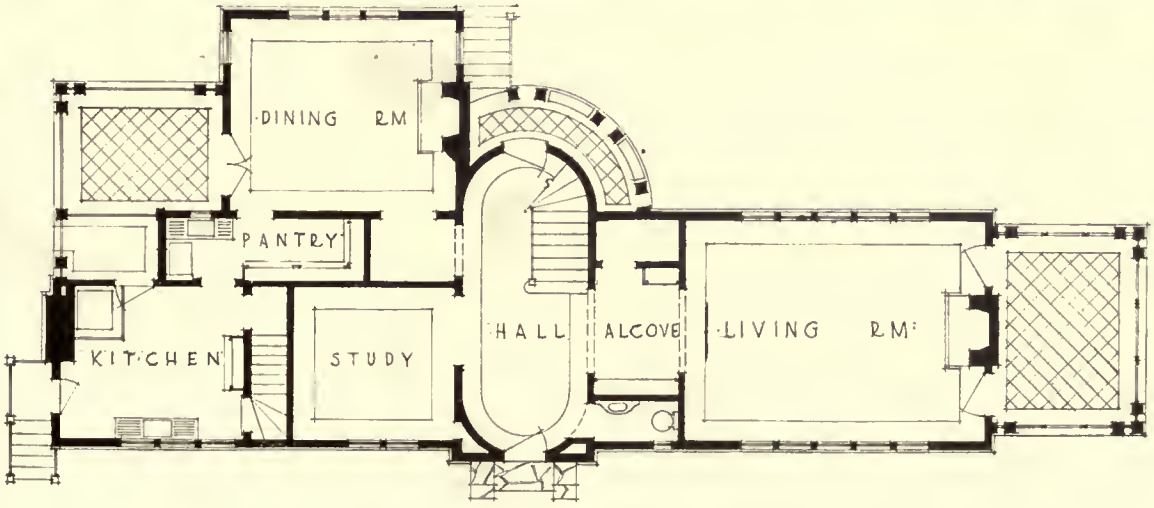


FIRST FLOOR PLAN

SECOND FLOOR PLAN

HOUSE OF L. H. TAYLOR, ESQ., RIVERDALE, N. Y.

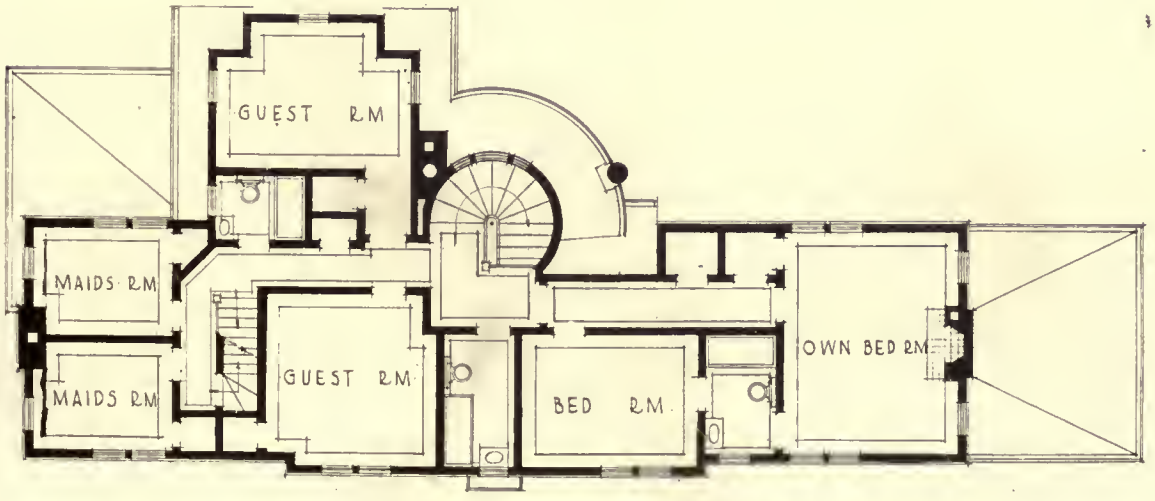
MR. DWIGHT JAMES BAUM, *ARCHITECT*



HOUSE OF A. F. ELIOT, ESQ., RIVERDALE, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

REAR VIEW



HOUSE OF A. F. ELIOT, ESQ., RIVERDALE, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

HOUSE OF A. F. ELIOT, ESQ., RIVERDALE, N. Y.

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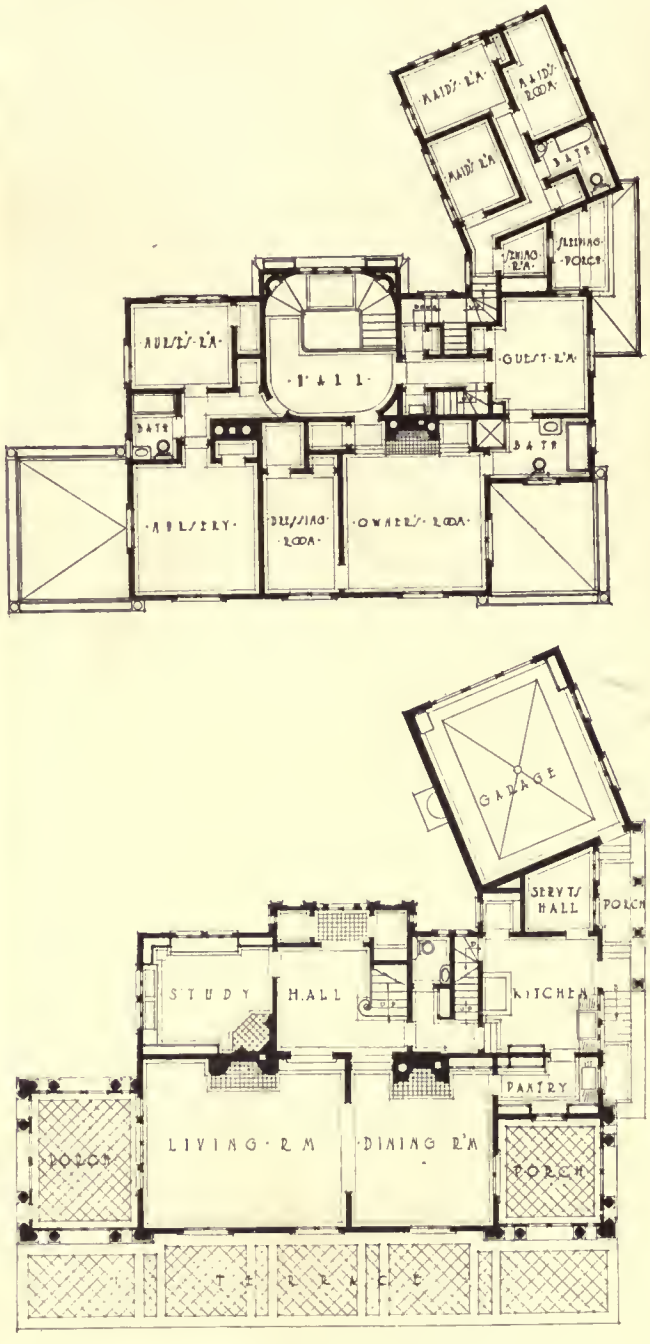
HOUSE OF J. M. R. LYETH, ESQ., RIVERDALE, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*



HOUSE OF J. M. R. LYETH, ESQ., RIVERDALE, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

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VOL. CXI JANUARY 24, 1917 No. 2144

NEED FOR UNIFORM STATE LAWS LICENSING ARCHITECTS

SINCE January first, two chapters of the Institute, those of Indiana and South Carolina, have passed resolutions favoring the passage of state laws to regulate the practice of architecture. It is stated that the Indiana law as proposed will follow substantially along the lines of the Illinois law, which has now been in operation for a number of years, while the measure pending in South Carolina embodies such rules and regulations as have been suggested by the exigencies of practice in that state.

Apparently there is little doubt but that in a comparatively few years every state in the Union will have on its statute books some sort of law designed to regulate architectural practice, and under present conditions their provisions will differ widely. There is no reason apparent, however, why the essential requirements of laws which have the same objects should not be the same in all states, and a Congress made up of the boards of examiners of the various states in which license laws are now in operation should be able to furnish material for a law that would be superior to any now in force. If this were done it is reasonable to suppose that states already committed to the theory of regulating architectural practice would see the wisdom of substituting such a law for laws now in force, and other states would adopt it as rapidly, as sentiment in favor of such regulation was sufficiently strong to make the enactment of a law possible. The advantages of a uniform law are many and apparent. Chief among them is the fact that it would offer greater protection to the public by providing a better law than is now in force anywhere for eventual adoption everywhere. Incidentally, it would probably prove of great convenience to architects practising in a number of states, if practically the same law were in effect universally. For example, it would obviously be unnecessary for an architect licensed in one state to undergo examination before being permitted to carry on work in another.

Unless some action is taken in the general direction indicated within a comparatively short time, we will have license laws in the majority of the states of the Union, differing in so many respects as to produce an almost endless amount of confusion and annoyance to all parties concerned. Further than that, there is little doubt but that some of the laws that will be enacted—if no outside advice or direction is availed of—will constitute a hindrance to the development and practice of architecture, and a menace to the public, instead of an advantage and protection, as intended.

THE RELATIVE IMPORTANCE OF THEORY AND PRACTICE

THE discerning reader will probably have had it impressed upon him that there has lately been renewed the perennial discussion between the exponents of the higher, or academic, education and those who believe the hard school of experience is the only one that can adequately fit men to solve the problems confronting either the individual or the nation.

On the one hand there has been, unconsciously perhaps, set up a certain aris-

tocracy of education, and, while not openly asserted, it is none the less forcefully implied by it that the man with a degree or diploma from some college, university or other recognized institution of higher learning, is better equipped and will as a result handle with greater intelligence and ability matters entrusted to his care than it would be possible for one to do who had simply a practical knowledge of them. The opponents of this view are probably to be found chiefly in the ranks of the self-made men who admit a lack of early educational advantages but point to a large measure of accomplishment to sustain their side of the argument. As is usually the case when the disputants are widely separated in their points of view, a position somewhere between the extremes presented is one that most nearly represents the true situation.

There are unquestionably many men who have made notable successes in life following brilliant records in college and, on the other hand, there are many who have achieved success in spite of the very positive handicap imposed by the lack of academic training. As a matter of fact, we can never be sure just how far the successful self-made man would have gone with the added advantage of a thorough education, or the successful college man without it. In the same way it is impossible to say how many failures a college course would have prevented, or how many minor successes a few years in the school of experience at the critical period of a career would have made brilliant ones. These facts are generally conceded by men of both training and practical experience, who, in the nature of things, should be best fitted to judge. But the opinions of no group of men who are merely achieving success in the form of material accomplishments, will prevent the outgivings of those who, in the seclusion of academic surroundings, from various "chairs" in our most celebrated universities present arguments that, in their well-constructed English and their strict adherence to rules of logic, may fairly be regarded as unanswerable. While we believe firmly in our institutions of learning, and maintain that even the most successful self-made man would have made a much greater success with the aid of a thorough education, we are also believers in the inestimable value of practical experience. The ideal preparation for a lifework is a combination of theory and practice, and probably the greatest problem confronting educators to-day is how to make the courses offered by our educational institutions more practical, and thus more nearly fit the graduate to take up the problems of life upon the completion of his college course. When that is accomplished, the discussions of the value of theory versus practice will disappear automatically; also the profession of architecture recruited from the product of such institutions of the future will suffer less humiliation by the selection of so-called "practical builders and business men" to handle building operations for banks, trust companies and large commercial concerns, on the theory that the architect is a visionary, theoretical, impractical personage who, while perhaps possessing a certain artistic ability, lacks business acumen and practical knowledge necessary to the production of the best buildings (from a physical standpoint) for the least amount of money in the shortest possible time. If the requirement of artistic design is recognized at all by these hard-headed business men, they occasionally undertake to secure it without sacrificing the other features regarded by them as more essential, by placing the designer under the direction of the business organization in charge of the operation. This, as most practitioners know, is a present condition and not a theory.

A Public Comfort Station Bureau

(*Continued from page* 56)

moral atmosphere and be inexpensive to build and operate.

This public comfort station, it is claimed, can be erected out of local materials and fully equipped at a cost of from six thousand to eight thousand dollars, depending upon the materials used and their cost and that of labor in a given locality.

Hampton Court Apartments, Indianapolis, Ind.

MESSRS. GEORGE, MAC LUCAS & FITTON, *Architects*

Hampton Court consists of three groups of buildings located on North Meridian Street, Indianapolis, Ind.

The Court is made up of twenty-nine separate and individual semi-attached houses, each with its own front entrance, vestibule, hall and stairway. In addition to these features each house has a completely equipped laundry and drying room in the basement; a sun parlor, living room, dining room, coat closet, pantry and kitchen on the first floor; four sleeping rooms, linen press and bath on the second floor and two maids' rooms with bath on the third floor.

Particular attention was given to the service portion of each house, ample cabinet space being provided in the kitchen and pantry, inlaid linoleums placed on the floor and Sanitas wall covering on the walls. Refrigerators are iced from the outside and large size gas stoves and sinks are installed.

Attractive sun parlors lead from each living room and afford a beautiful view from the gardens and terrace. Living rooms are of ample size and are equipped with mantels of tile and wood construction of pleasing design. The dining rooms are attractively paneled in wood and are reached through double glass doors from the living room. On the second floor ample closet room is provided and the bathrooms are especially attractive, with tile floor, wainscot and tiled-in tub.

These buildings form the three sides of a quadrangle and all face upon a garden 60 ft. in width.

The exterior treatment of the building is based upon various Old English and Tudor precedents. The north and south wings are set back 100 ft. from the street curb and the vacant stretch of ground in front of the court lends itself admirably to landscape gardening and drives.

The main construction elements are concrete basements, hollow tile partitions, walls and backing up walls, brick veneer facings, terra cotta trim and slate roof.

All interior woodwork, including stairs, are specially designed.

The heat is furnished from a private heating plant in the northwest corner of the grounds.

Adjoining the boiler house is a large recreation ground set apart for children.

The Canberra, Australian Competition

It is stated in the *English Architectural Press* that "Mr. Bamford, Australian Minister for Home Affairs, announces the postponement until a more favorable period of the competition for architectural designs for the new Parliament House at Canberra."

Standardizing Official Commendation

Standardization would seem to be carried to a considerable degree when we learn that in the reports of heroic action at the front, coupled with the bestowal of war medals, a certain form is used in each instance.

In a recent issue of *The Architects' and Builders' Journal,* commenting on the active part taken in the war by members of the architectural profession, it is stated:

"Young architects are winning high distinction in the field of honor. Two outstanding instances were recorded last week. Second-Lieut. William Godfrey Newton, A.R.I.B.A., youngest son of the President of the R.I.B.A., has been awarded the Military Cross 'for conspicu-

ous gallantry in action.' So runs the announcement in the *London Gazette*, which continues: 'He placed a lamp in the open to guide a night assault. Later, although wounded, he rallied the men round him and bombed the enemy with great courage and determination. He set a fine example.' After the description, the comment seems rather superfluous. Doubtless it is a 'sound form of words' deemed officially to be appropriate to such occasions; for we observe that it is repeated with respect to Lieut. George Frederick Bowman, who also is an architect and the son of an architect, and, before the war, was engaged in his father's office in Greek Street, Leeds. Lieutenant Bowman, the official record runs, 'led his men with great courage and determination. Later he assisted in repulsing enemy counter attacks and himself led several daring bombing attacks. He set a fine example.' So the parallelism between the cases is a matter of deeds as well as of words and antecedents. But the words do not stale with repetition, since they are warranted by such glorious deeds."

The Portland Cement Industry

The Architect and Contract Reporter of London, in a recently published article on the Portland cement industry, states that the three largest cement producing countries and their output is as follows: Great Britain, 3,000,000 tons; Germany, 5,000,000 tons, and the United States, 15,348,000 tons. Referring to the causes for the relatively small production in England, the article continues:

"As in so many other branches of industry in this country, our manufacturers of Portland cement have been content to do as their fathers did—to continue the use of antiquated machinery and antiquated methods, while their competitors overseas were introducing and utilizing every possible improvement that would tend either to the higher quality of the product or the reduction of the cost of producing. Not only were our manufacturers for the most part content to rub along in the old way, but even if they wished to adopt newer machinery they had to go abroad for it.

"Up to within a few years ago most of the machinery came from Germany, as no British firm was prepared entirely to equip works with plant embodying the new designs, although there were firms who could supply certain parts. It is gratifying to note that this unsatisfactory state of things no longer exists, and British-made cement-making machinery can now challenge comparison with anything of the kind manufactured in Germany.

"We still, however, remain markedly inferior to our competitors in the United States; and much remains to be accomplished in the designing of Portland cement machinery in this country to bring it to the same standard of efficiency that now prevails in the United States."

Engineers the Guests of Florida Architects

A pleasant instance of the cordial relations that should exist between architects and engineers is the invitation extended by the Florida Association of architects to the Florida Engineering Society, to attend the convention of the architects to be held in Tampa on February 8th to 10th inclusive.

Nothing but good can come of fraternizing of this character. It will undoubtedly result in mutual improvement both as to scientific and practical efficiency.

Turner and the National Gallery

Probably but few people aside from those directly interested knew that of a total of 23,000 works of art in the British National Gallery 20,000 are by Turner.

A similar disproportion probably exists in no other country, and is due to the acquisition by the National Gallery of the entire accumulation of Turner's work.

It seems incredible that one artist could have produced so much work, but the large number of subjects indexed and attributed to Turner is augmented by a great number of insignificant pieces that are really merely memoranda.

Referring to this collection, the *Architect and Contract Reporter* states: "The number is only made up by the inclusion of a large collection of those rapid memoranda—they can scarcely even be called sketches—which Turner was accustomed to make, roll up and stuff into his pockets to serve as his own personal notes for future reference, and intended during his lifetime for no eyes but his own."

Art and War

The traveler in Belgium and in no city, perhaps, more than in Bruges, has, in the past been confronted by a number of statues of very doubtful artistic merit. These, we learn, have been taken down in large numbers by the invading army, and the bronze of which they were composed, used in the manufacture of war munitions.

Thus, it would seem, that even war furnishes some slight compensations for its horrors.

The Country's Oldest Building

One of the really historic buildings in the United States is said to be the residence of the Governor of New Mexico in the city of Santa Fe. It is said to have been erected by the Spanish when the greater part of the Western world was theirs and was the finest house in the colonies. According to legend millions of dollars were spent on the quaint old structure. Most of the material in it was brought from Spain and it was constructed by the best builders to be found among the Dons of that period. In the ship which brought over the building material and builders were many art treasures used to decorate the finished house.

After the Spanish departed Mexicans used the house as a governor's palace and with the overthrow of the Mexicans by the United States Government, it was continued as the residence of the head of the territorial government that was formed. The house is still in use.—*Southern Architects and Building News.*

Personal

Mr. A. Chapman Fernald, architect, has opened an office for the practice of his profession in Edgartown, Martha's Vineyard, Massachusetts, and will be glad to receive manufacturers' catalogs and samples of building materials.

Mr. James H. Bigelow, architect of Springfield, Mass., has opened an office for the general practice of architecture in Irvington St., that city, and desires manufacturers' samples and catalogs of building materials.

What Makes a Bid Low

The public, as a general rule, when inviting competitive bids on any piece of work usually gives consideration only to the lowest bid received.

Apparently the lower the bid, the more consideration it receives. This procedure has brought about a condition in competitive bidding that is of danger to the public. It is creating an effort totally toward cheapening every piece of work, without proper consideration as to its quality.

The income tax return reports, Federal Trades Commission report, and the data collected all over this country, show the terrible condition of affairs in structural contracts.

Contractors are of the opinion that one of the greatest causes for losses in construction work is ignorance of the cost; the next greatest cause is lack of proper capital.

The several reasons why bids are too low, architects and contractors enumerate as follows:

First: An absolute ignorance of the cost of the work contemplated.

Second: A destructive desire to cut the other fellow's bid, no matter at what loss to themselves.

Third: An effort to make the original bid as low as possible, even below cost if necessary, and take the chance to recoup on substitution or extra work.

The public is awakening to the fact that all over the United States that accu-

rate knowledge of the costs of manufacturing is the ultimate salvation of the manufacturing business.

Insofar as the overhead expenses are concerned, this idea has not been accepted by the majority of contractors; some make the statement that they have no overhead expenses; this might obtain in certain cases where the contractor pays no license or taxes of any sort, and carries no protective insurance; nor has any of the incidental expenses that tend to his responsibility.

As long as the public is demanding cheap work, it is unquestionably getting it, and everyone knows where less than cost is paid by any individual the consumers as a whole, including himself, ultimately pay the shortage, thus maintaining ever and ever the equation.—*Building Review.*

BOOK NOTES

PRACTICAL BOOK OF ARCHITECTURE. By C. Matlack Price. Illustrated; decorated cloth, octavo, in box, $6.00 net. J. B. Lippincott Company, Philadelphia and London.

This work represents an addition to the Home Life Enrichment Series, whose other volumes are devoted to Arts and Crafts, Period Furniture, Ornamental Rugs, Out-of-Door Rose Growing and Garden Architecture.

It is now generally conceded that every man and woman making any pretense to culture desires to know something concerning architecture. All of us should, in fact, have an understanding and appreciation of the broad principles upon which architecture is founded. This book undertakes to teach these principles in a way to make them readily understood by the layman, so that he can look with understanding at the buildings of all types. An appreciation of architecture at once changes the city street from a mere thoroughfare bounded by walls of buildings to one of life's interesting features.

The work is profusely illustrated and well printed. The author appears to have approached the subject with proper reverence, and has presented it in logical sequence. Of course, the work is not intended for the technical reader. It is as the title proclaims, "The Practical Book of Architecture."

It is divided into two parts, the first a guide to styles, explaining the orders. It enables the reader to better comprehend what follows in part two, in which is presented a practical guide to building.

THE CANADIAN TRADE INDEX, issue of 1916-18, price $5.00. Compiled and published by the Canadian Manufacturers' Association, Inc., Toronto, Can.

The purpose of this publication is a compilation of a dependable list of articles made in Canada, and the names of their manufacturers.

The information has been so arranged as to make it easily accessible.

DRAWING FOR BUILDERS. A problem course in architectural drawing by R. Burdette Dale, M. E. Full cloth, 160 pp., size 8 x 11 inches, price $1.50 net. New York, John Wiley & Sons; London, Chapman & Hall, Ltd.

In the preface to this book the author states that it is intended to serve as a course in elementary architectural drawing, and to be particularly useful to builders and students not well advanced in architectural drawing.

Naturally the text and accompanying illustrations are more or less elementary in character. The book, in the field to which it is directed, will have text-book value in forming at the start correct methods, and avoidance of errors so difficult of correction when the student has reached a more advanced stage.

MECHANICAL EQUIPMENT OF BUILDINGS —Vol. 1. By Louis Allen Harding and Arthur Cutts Willard. Full leather, 615 pp., 7 x 9¼ inches, price $4.00 net. New York, John Wiley & Sons; London, Chapman & Hall, Ltd.

The authors of this work claim for it a new departure in the literature of the mechanical equipment of buildings. Its object is to supply a reference book for

engineers and architects that will contain sufficient theoretical and commercial data for practical use in the designing room, and at the same time present as a text book for students the relation between the theoretical principles involved and their practical application. In volumes II and III it is proposed to discuss the problem of various types of plants and their equipment. The present volume is subdivided into twenty-one chapters. These treat of physical units and measurement of heat including various types of transmission.

Systems of heating, temperature and humidity control are discussed, concluding with a final chapter on cost of equipment and preparation of plans and specifications.

Architects will find this book a useful reference volume.

Architectural Competition of Novel Character

Five hundred dollars in prizes will be awarded by the management of the National Complete Building Exposition, to be held in the Grand Central Palace, New York, March 5-11, to the winners in an unusual architectural competition to be held in connection with the show. The novel feature of this competition is that the contest is between plans of houses which have actually been built within the last two years at a cost per house not exceeding $5500. This price is exclusive of the cost of the lot.

Not only must the house have been built but contestants are required to furnish sketch or a photograph of it, together with its exact location, state, city, street and number. No restrictions are imposed as regards materials used, nor must the winning house necessarily have cost the maximum figure stated. A house of less cost may take first prize. The idea is to produce, if possible, the plans of the house in the United States which gave the best value in all the term implies for the money expended.

The final awards will be made by a jury comprising seven prominent New York architects. Prizes will be divided: $200, $100, $75, $50 and three of $25 each. Honorable mention will be given the designs placed from eighth to fifteenth.

The contest will close February 5th, 1917.

Full details of the contest provisions will be furnished upon application to the National Complete Building Exposition either at its Eastern offices in the Grand Central Palace, New York, or its Western office in the Leader-News Building, Cleveland, Ohio.

Sculpture in America

Selwyn Brinton, M.A., in *The Architectural Review* of London, pays a graceful tribute to Daniel Chester French, and frankly declares that his work presents splendid examples of the highest form of commemorative art.

Referring to the place it is believed Mr. French occupies among sculptors in America, past and present, it is stated:

"Appropriately, therefore, we may turn at the present time to the work of one who is in America what the great Leonardo Bistolfi is in Italy—pre-eminently the Sculptor of Death. This because he has that rare gift of rising in his art to the dignity of conception of a sublime sorrow—of a sorrow which is hallowed by the memory of sacrifice, tended by the unforgetting ministry of love.

"Mr. Daniel Chester French stands at the front of modern American sculpture; and this is the more interesting because, like Saint-Gaudens, his art synchronizes with the wonderful development of plastic art in that country, and still reveals its highest achievement. A century ago, and even far nearer to us than that, American sculpture was, as far as it existed at all, a stunted growth, an aspiration not yet materialized. The whole conditions of the country (meaning, of course, the United States) seemed against it—the climate—the Puritan tradition, inimical to all emotional art, and most directly to plastic art—the absorption of the young nation's energies in the immense and seemingly unlimited possibilities of material progress.

"The energy of a little group of men

altered all that. They lectured, they wrote, they insisted on making beautiful sculpture an indispensable element in the public places of the fast-growing cities, in the splendid capitols which arose in every State in the Union; and, having thus prepared the ground, they wisely closed the door (as far as their influence extended) to the inevitable invasion of European artists, and by so doing laid the foundation of the existing school of American sculpture in the men of to-day."

INDUSTRIAL INFORMATION

A New Disappearing Footlight

The Universal Electric Stage Lighting Company, 240 W. 50th Street, New York City, has recently issued a folder illustrating and describing the Kleigl Disappearing Footlight, designed for high schools, auditoriums, halls, churches, theaters, etc.

These footlights are made up and furnished in completely finished sections, 3 to 5 ft. in length, which can be mitred to fit any curvature of the stage. They can also be provided for a single or double row of lamps, with two or more color combinations. The structural simplicity of these footlight units is especially noticeable. Each section consists of a top frame and door made of one-inch hardwood to match the flooring so that for installing all that is required is to provide a space in the floor of sufficient depth and width to receive the unit, and the top of the footlights is inserted flush and floored in to form a part of the stage floor. The footlights are mounted on the lower side of the door and in accordance with the Underwriters' Rules are set in a galvanized iron reflector trough. Connections are made through an iron splicing box, which can be placed either in the center of section or at the end. The door or cover of the footlights is hinged on an iron bracket hinge supported on the top frame. To raise the footlights the doors are simply swung open by means of pull rings. A small spring catch holds the open section in position. When raised the footlights extend 3½ in. above the floor level.

This disappearing footlight would seem to supply a real demand in the case of buildings where the requirements of footlights is an occasional one.

Copy of the folder or any desired information will be sent upon request.

Record Filing Cabinets

The Yawman & Erbe Manufacturing Company, Rochester, N. Y., has just issued general catalog No. 2816, which illustrates in detail a great variety of filing devices including cabinets of both wood and steel, efficiency desks and various office supplies. It is stated that all the cuts used in this catalog are new, all the copy is new and most of the goods shown are new. The catalog is printed on coated paper that does justice to the cuts. It consists of 96 pages with double cover and nearly 500 illustrations. No prices are quoted in the catalog proper, and the space which has been heretofore taken up by tables is now devoted to descriptive text written in a way to enable customers to understand what the different devices are for. The catalog is divided into two major divisions—wood and steel. The wood and steel sections are in turn sub-divided. The arrangement is logical and it is believed that no difficulty will be experienced in finding any catalog item. Copy of this catalog will be found of exceptional value in fitting up offices, but of particular interest to architects is a mammoth vertical file to take blueprints, drawings, etc. This cabinet will file from 700 to 1000 large blueprints, drawings, tracings, maps or charts. They are kept flat and in position for instant reference. This file is made in three sizes, for drawings 40 x 36, 44 x 30, and 36 x 48. Of course, smaller drawings can be placed in either of the cabinets. When opened, the smooth front panel of the cabinet makes a drawing board, and reference table in a particularly convenient position to consult the contents.

Copy of this catalog will be sent to architects upon request.

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DETAIL OF SMALLER PULPIT, CATHEDRAL, SALERNO, ITALY

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, JANUARY 31, 1917 NUMBER 2145

FIGURE IN WOOD

By SAMUEL J. RECORD

FIGURE in wood is for the most part due to irregularities in growth and variations in color. Exceptions to this rule occur in certain woods which normally have a decided contrast in seasonal growth and prominent medullary rays. Thus quarter-sawed oak owes much of its popularity as a cabinet and finishing wood to the very large rays which appear as large flakes or narrow stripes, depending upon the angle at which it is cut. Plain sawed or tangentially cut oak bears little resemblance to the quartered material, for here, as in flat-sawn ash and chestnut, the alternating light and dark portions represent the two parts of the growth ring. The latter statement applies also to the hard pines, which ordinarily have no figure except when plain sawed or rotary cut, with the difference that in the pines the spring wood makes up the light areas and the summer wood the dark, while in the ring-porous hardwoods the opposite is the case.

CURLY LONG-LEAF PINE

Among the irregularities of growth producing figure highly prized for veneers the most noted are burls. These are abnormal growths or excrescences common to almost every species of tree, though only in a comparatively few instances are they of merchantable size and quality. They may arise anywhere on a tree, but the burls of greatest value are at the root collar, usually just below the surface of the ground. Those growing on the upper portion of the trunk are commonly unfit for cabinet work owing to defects caused by insect, imbedded bark, decay or other sources. Valuable root burls are turnip-shaped or sometimes one-sided.

Burls are formed as the result of some injury to the tree which stimulates the growth of dormant buds or causes many new ones to arise which cannot develop into branches but do form a gnarly and interwoven mass of dense and hard, woody tissue of very intricate structure. Inside the bark the surface of the

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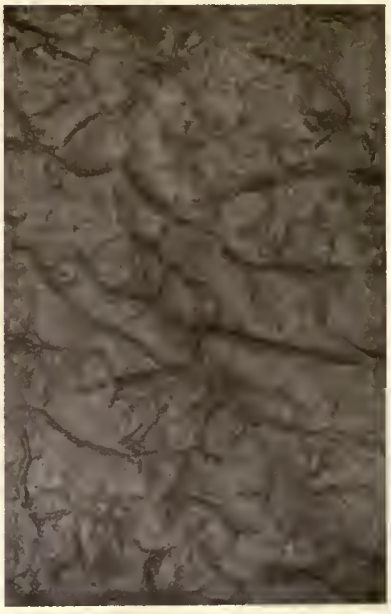
PRIMA VERA WOOD WITH FINE CURE



A PECULIAR MOTTLE IN MAHOGANY

MOTTLED YELLOW POPLAR
Possibly Due to Woodpeckers

burl is covered with little spines where the buds emerge. In the center of each bud is a small cylinder of pith, and about it a mound of wood, the fibers of which run in different direction from the rest of the piece. When cut across, the pith of the bud shows up as a dark speck with little circles around it, giving the appearance of an eye.

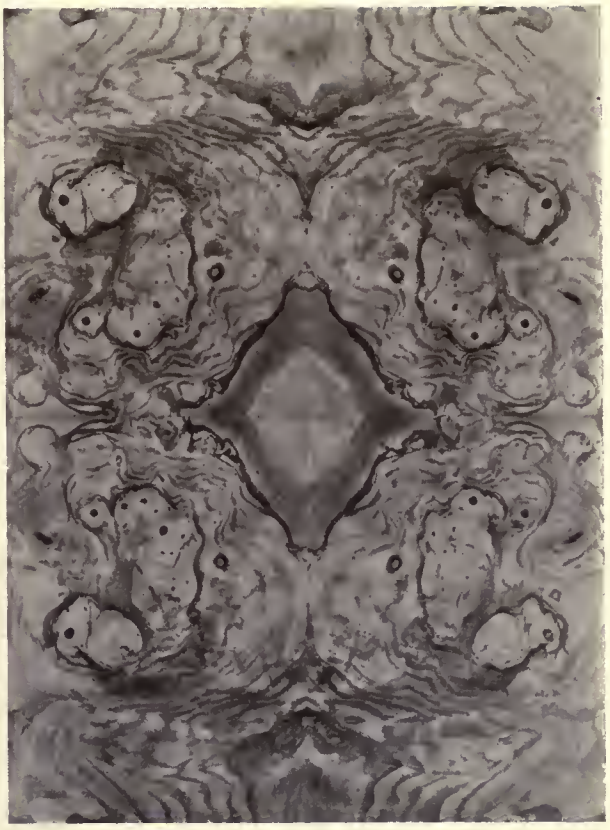
Trees producing merchantable burls in this country are black walnut, ash, birch, oak, redwood and black cherry. Walnut burls are most sought after, though some of the others produce remarkable effects. Trees producing burls are usually rather dwarfed and stunted and grow in the open rather than in dense woods. Burls are common on the walnut trees of Austria, Turkey and Italy and, owing to their finely mottled and beautiful figure, are highly esteemed for cabinet purposes. Thuya burls often attain large size abroad, but are not so common as formerly because of better control of the fire and grazing damage which stimulated them.

Gnarly old trees of little use for lumber may prove highly valuable for veneers. A few years ago a Chicago dealer bought an old walnut log in Oxford County, England, paying about $750 for it. This log was 20 ft. long and over 7 ft. in diameter at the large end and scaled 4200 board feet. Its chief figure was two enormous burls connected together by a twisted smaller section. When the whole was sliced into veneers, twenty-four to the inch, a total of 72,000 ft. was obtained, valued at over $10,000.

This same concern bought a black walnut log in Oklahoma that cut out more than 60,000 ft. of veneers. Although this tree was very thick through, it was exceptional in that the growth was decidedly eccentric, the pith being only four inches from one side. In flitching it was possible to obtain quarters more than 30 in. square. The figure displayed great variety of markings, such as mottle, stripe, curl, blister and wave. The value of the veneers was fully as great as that obtained from the English walnut log.

Not all purchases, however, turn out as well as these two, as it is extremely difficult and often impossible to tell from the outside of a log what it really contains on the inside. The writer knows of one instance where an experienced buyer paid $500 for a Circassian walnut log of exceptionally good appearance, but which upon being opened proved absolutely worthless. It was such extremes as these that prompted a New York veneer man to remark that a man with gambling in-

ASH CROTCH



ASH BURL

OAK CROTCH

A SATINWOOD PANEL

stincts can have every speculative ambition fully satisfied by going into the figured veneer business.

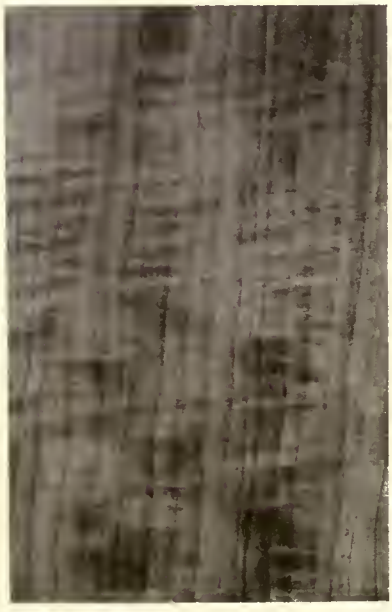
Much of the beauty of Circassian walnut is due to the presence of deposits of dark pigment irregularly distributed throughout the heartwood. These appear as stripings and mottling, often combined with abnormal grain, and produce veneers suited for furniture, panels and picture frames. The figure in red gum results from similar deposits of pigment. Selected material rivals Circassian, but the tone is softer and the design more vague because the color contrast is not so sharp and the grain of the wood is finer and much less pronounced.

A very common form of figured maple is known as bird's-eye. This is due to peculiar local distortions of the fibers, which are molded about projections in the inner bark. The cause of these projections is unknown, though variously ascribed to dormant buds, injury by woodpeckers and insect attacks. While there is no question that dormant buds will produce bird's-eye, as in the case of burls, yet in all ordinary cases of bird's-eye maple examined by the writer there was no evidence whatever of buds. Others who have studied these peculiar formations carefully report that they do not occur in trees less than about 3 in. in diameter, nor very high up in trees which are very much pitted at the base. It is not uncommon to find bird's-eye in yellow poplar that can be traced to the work of sapsuckers, but in this case the markings are in more or less regular rows around the tree.

There are two principal kinds of wavy growth, one in which the waves occur throughout the tree, and the other only in certain portions, such as near the insertion of large roots and branches, or in crotches. Certain species of trees have wavy wood throughout; in others occasional trees are found which show such structure. In such cases no satisfactory explanation has been offered as to the cause of the peculiar arrangement of the fibers and other wood elements. Sometimes the waves are large; again they may be very small, although in the same specimen there is usually considerable regularity. Wood with small waves is said to be curly grained.

Wavy growth near the insertion of large limbs or roots is purely local and can be satisfactorily explained. When the tree is young the limbs are small and the roots have not begun to swell much at the rootstock. With increased growth the branches thicken and usually tend to form a more acute angle with the trunk. The

CURLY ASH, PLAIN SAWED



QUARTER SAWED BLACK CHERRY

PLAIN MOTTLE IN MAHOGANY

tree also becomes more or less swollen or buttressed at the base, sometimes decidedly so, due to the necessity for firmer support in the ground. The change in

BIRCH BURL

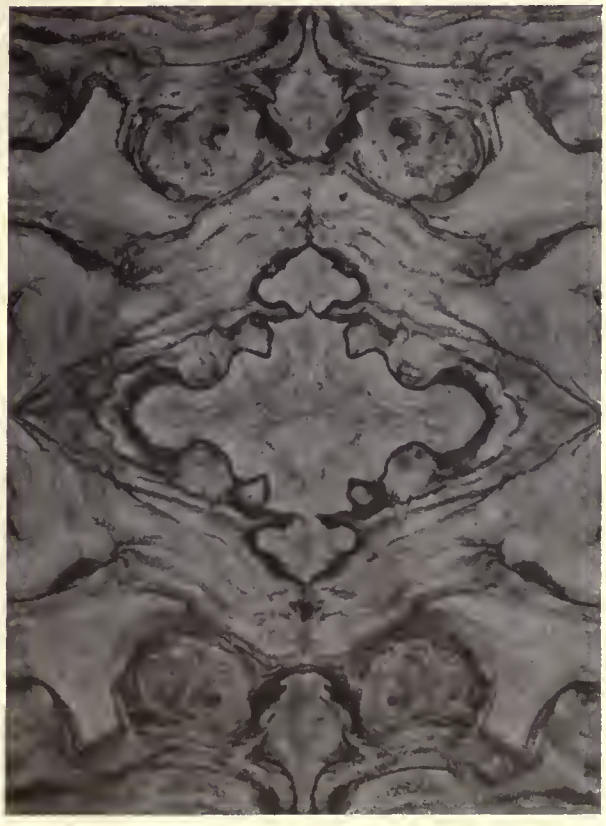
form of the branches or roots produces a folding of the bark, especially if it is thin.

Just beneath the bark is the cambium layer, a region of very soft generative tissue which forms new wood and new bark. The pressure of the bark on the cambium causes the new layers to be molded to correspond with the corrugations on the inner side of the bark. Consequently, as folds develop in the bark as a result of a shortening process, the wood is modeled accordingly. If the bark is very hard the shortening action may cause the fibers of the wood to bend in a different plane so that the waviness does not show clearly until the wood is split radially.

This change comes about gradually and if a wavy grained stump is split through the middle it will be found to be straight grained in the interior and from moderately to decidedly wavy toward the exterior. Wavy grain occurs in the bend of a crooked tree for the same reason.

Wavy grain interferes with the ease of working a wood, but adds materially to its attractiveness, particularly in one that is otherwise handsome. Thus in mahogany and black cherry the wood cut from a crotch makes beautiful veneers. Old black walnut stumps are often removed for veneers or for the manufacture of figured gun stocks. Areas long cut over are sometimes visited in later years and the stumps removed for such purposes. Such wood is usually free from serious decay, but is likely to show numerous season checks that may prove troublesome in working.

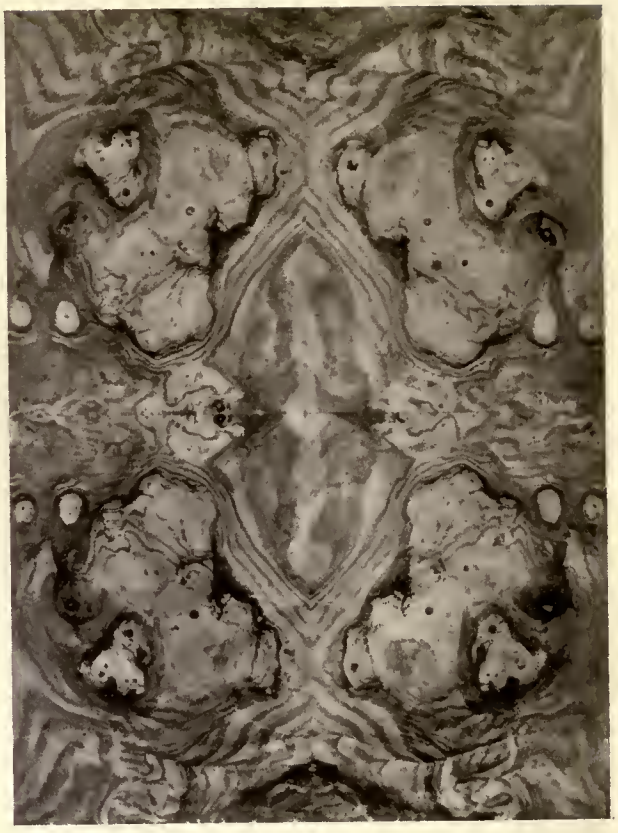
Woods in which the waves run in a radial direction, that is, from the middle



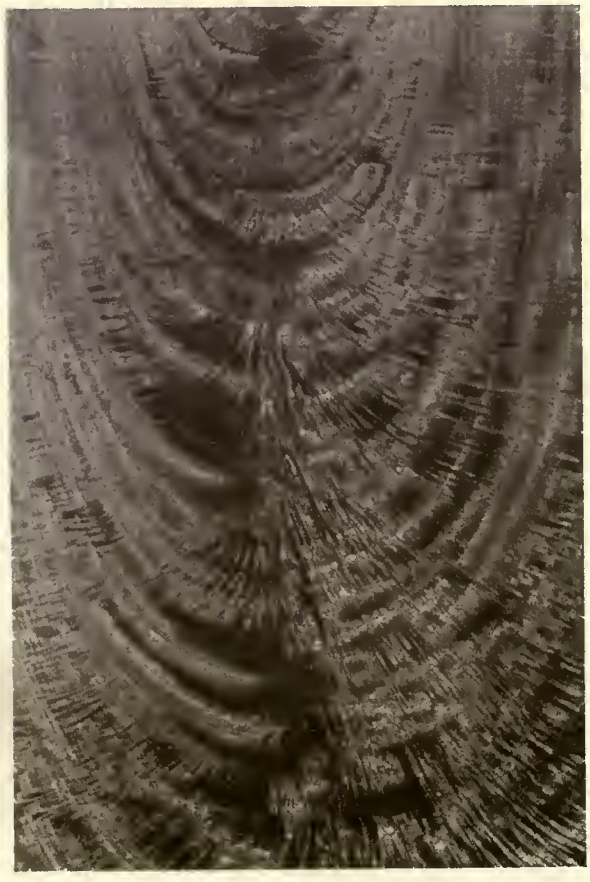
CIRCASSIAN WALNUT

of the tree outward, are in the English markets frequently termed "hazel," as "hazel spruce" or "hazel oak." In satinwood wavy grain is the normal condition, and longitudinal sections exhibit alternate bands of lighter and duller luster, accord-

CIRCASSIAN WALNUT



ASH BURL



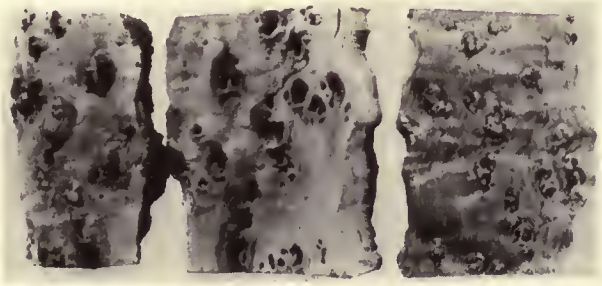
CROTCH MAHOGANY BURL

FEATHER GRAINED MAHOGANY
From a Crotch.

ing to the direction in which the fibers are cut. Specimens of redwood are occasionally found with very large regular waves. Such wood must be quarter-sawed to bring out the full effect of the grain. Owing to varying direction of the fibers, such wood is hard to surface without nicking or gouging.

Mahogany produces a greater variety of ornamental figure than any other wood. Typical forms have been named. Pieces cut from a crotch or at the junction of stem and large branch show "curls" which vary in length from one to three feet. The figure is of an irregular elliptic form with various markings and shades of color. When the figure breaks out in flame-like tufts it is called "feather." By carefully butting such figured pieces together large patterns and long panels may be secured.

"Mottle" is a term applied to marks which appear to be raised from the surface. Common forms show numerous ridges like representations of mountains on a small relief map, some running in nearly parallel lines at right angles to the grain of the wood and others decidedly irregular. "Plum mottle" shows very dark, plum-shaped spots distributed at random in the wood. They are structurally a form of bird's-eye, but owing to the deep color bear little or no resemblance to the common figure in maple.



1 2 3

1. Bark showing spines which fit into pits in wood.
2. Pitted outer surface of wood.
3. Rear view, or inner side of No. 2.

In mahogany and many other tropical woods the fibers and other elements, instead of running straight, are often arranged in alternating spiral bands of greater or less width. When these are cut lengthwise, as in a board, a very showy figure may result, with light and dark stripes showing. This is usually due, not to a real difference in color, but to the way in which the light is reflected, just as the long pile of a rug looks glossy or dark, according to the direction in which it is stroked. The portion of the

QUARTER SAWED MAHOGANY

REDWOOD BURL

CURLY GRAINED BLACK WALNUT

wood with the pores opening toward the observer appears dark; that with the pores pointing in the other direction, light. When the specimen is turned or viewed from a different angle these light and dark stripes change places. This figure, which is often called "roe," is sometimes found in some of our native woods, particularly sycamore. Quartered sycamore also shows conspicuous deep-colored rays producing a figure known to English fretworkers as "lacewood."

Cutting up figured woods so as to produce the finest effects requires great skill. In sawing or slicing burls and like material the leaves of veneers are kept together in the order in which they are removed. By careful matching and joining, geometrical figures in double and quadruple arrangement can be secured for artistic panels. The natural structure of a burl is intricate but indefinite. The veneers permit a building up of a definite pattern by repeating the natural figure, thereby securing a symmetry and balance which make possible beautiful and highly artistic effects.

Air Conditioning in the Manufacture of Ammunition

It is interesting to note that among the many new problems that have been presented during the European war is one of air conditioning in industrial buildings utilized for the manufacture of ammunition. In an article contributed by Mr. J. L. Lyle to a recent issue of *The Heating & Ventilating Engineer*, we read:

"Time fuses for shrapnel shells must be capable of setting for explosion of the shell anywhere from within 16 ft. of the muzzle of the gun to a distance several miles away, while the shell is traveling at a velocity of 1700 ft. per second, or about 20 miles per minute. Two shells set for exploding at one mile and fired consecutively should function within 40 ft. of each other.

"The accuracy of firing is absolutely dependent upon conditioning the powder, and as the powder used in a time fuse is very hygroscopic, the humidity of the atmosphere in which the fuse is loaded must be maintained within a total variation of less than 2 per cent.

"Extremely accurate control of humidity and temperature is, therefore, one of the first essentials in a fuse-loading plant, and inasmuch as 24-hr. per day plant operation is necessary and as late deliveries are generally penalized in this class of work, the air conditioning system, like all other apparatus, must be designed and installed with every precaution for uninterrupted operation."

South Carolina Architects Favor State Licensing Law

At a meeting of the South Carolina Chapter of The American Institute of Architects, held in Charleston, January 10, a resolution was passed, authorizing the legislative committee of the Chapter to indorse the passage of a bill in the present Legislature "to define the qualifications for the practice of architecture in the State of South Carolina and to provide for the examination and registration of architects."

Fires from Preventable Causes

After analyzing the details of a large percentage of all fires in Minnesota the Actuarial Bureau of the National Board of Fire Underwriters has ascertained the following facts relating to the causes of these fires for the year 1915: Strictly preventable fires, loss $1,053,424, or 25 per cent of all fires; partly preventable causes, such as electricity, explosions, incendiarism, spontaneous combustion, etc., $1,514,781, or 36 per cent of all fires. Unknown causes, probably largely preventable, 39 per cent of all fires. It is estimated that 26 per cent of all fires in Iowa, and 24 per cent in Wisconsin were strictly preventable, and that 45 per cent of all fires in Iowa and 32 per cent in Wisconsin were from partly preventable causes.—*Improvement Bulletin.*

BUILDINGS OF THE SOCIETY OF ARTS AND CRAFTS, DETROIT, MICH.

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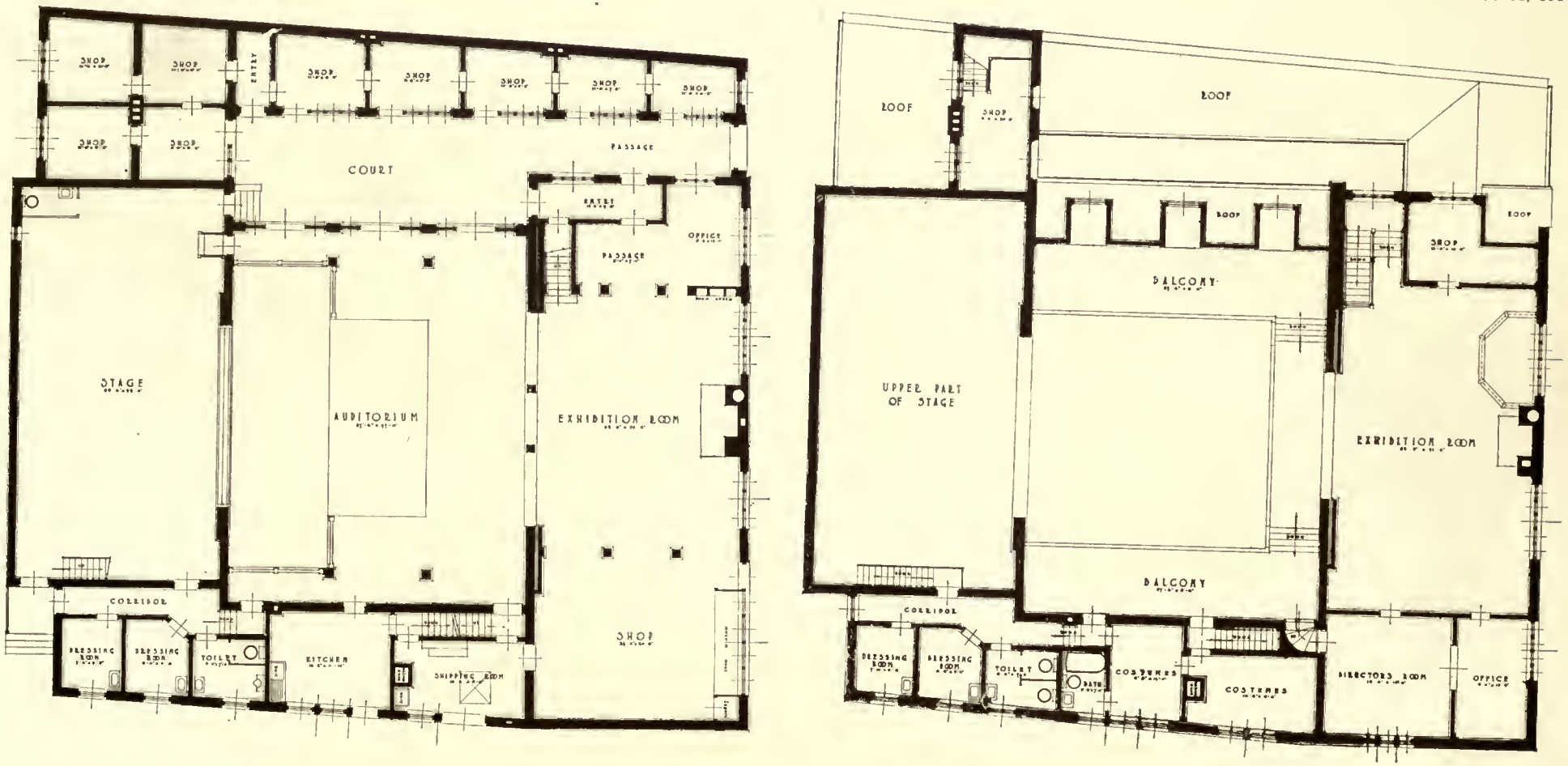

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MAIN EXHIBITION ROOM

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COURT BETWEEN MAIN BUILDING AND CRAFTSMEN'S SHOPS

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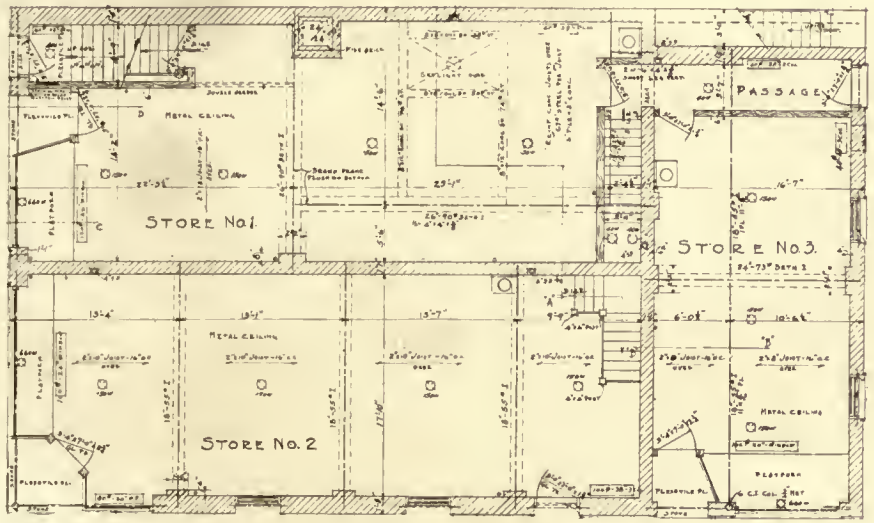

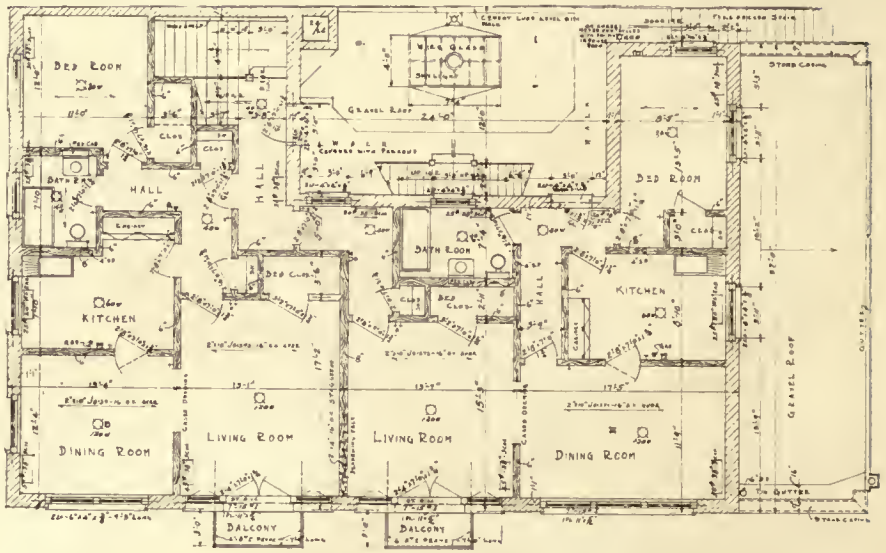

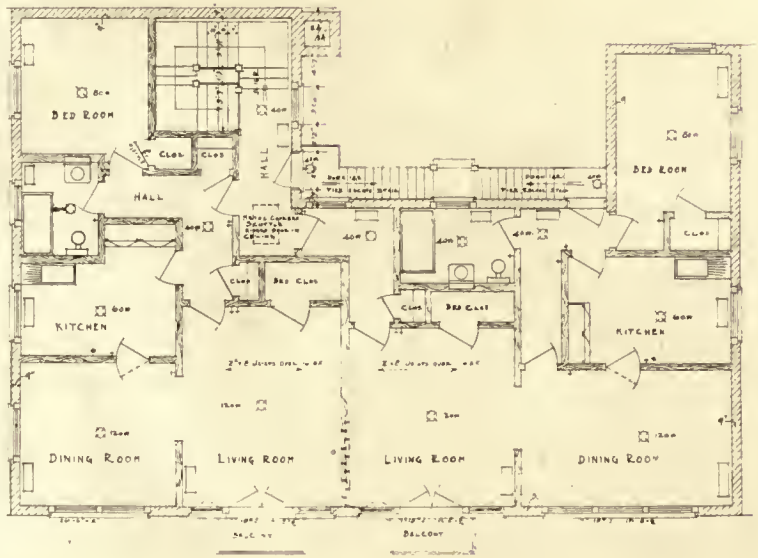

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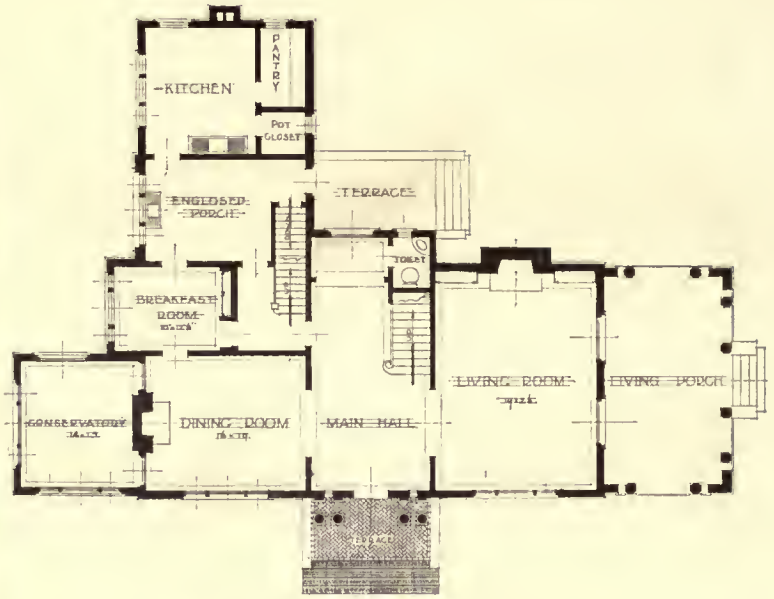

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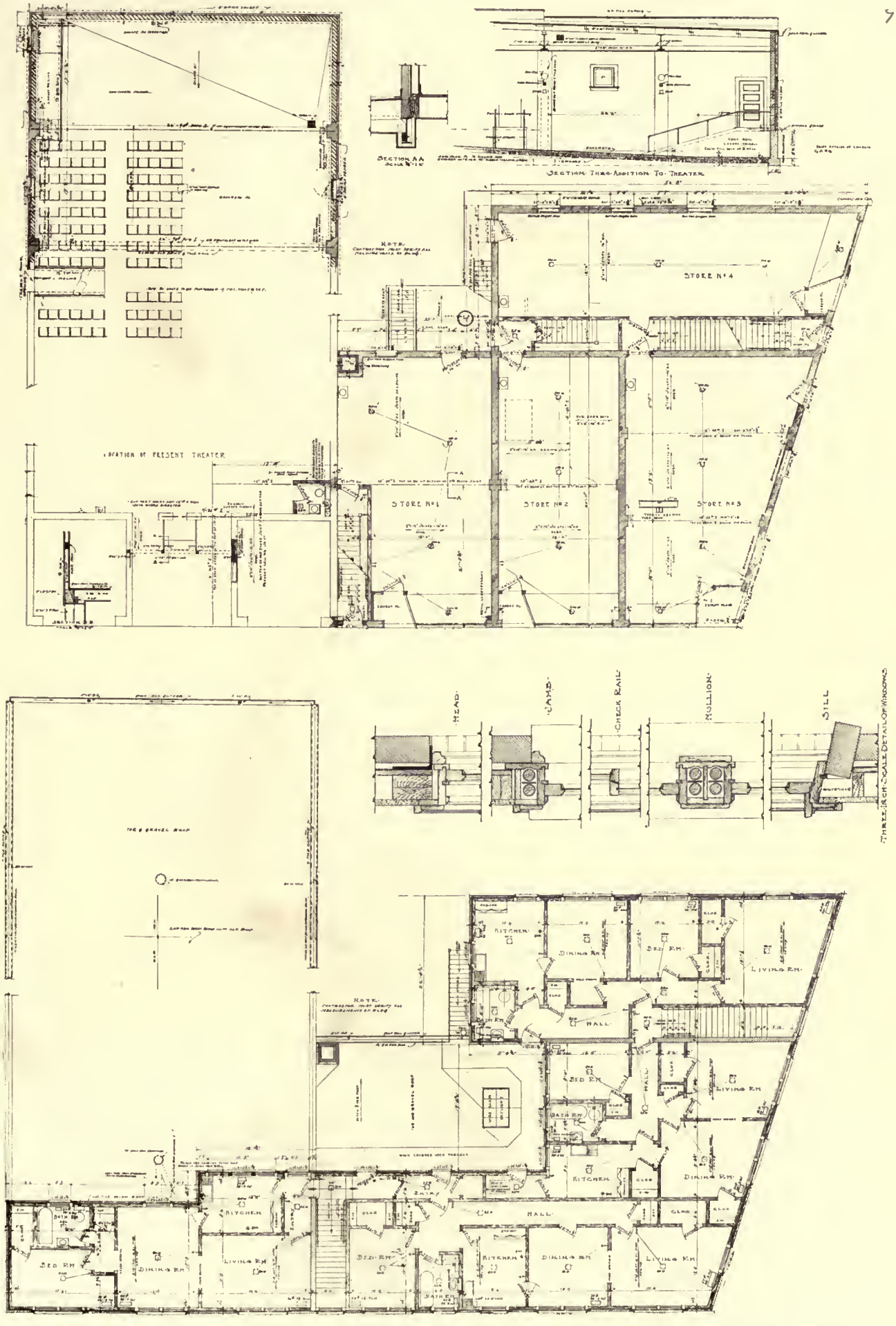

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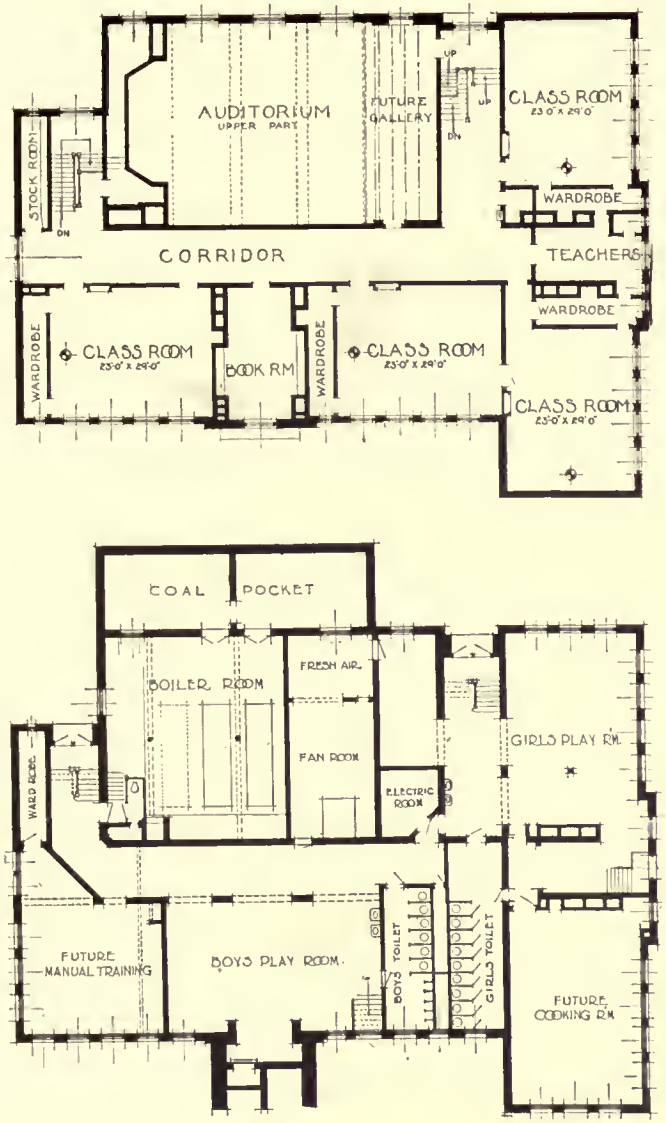

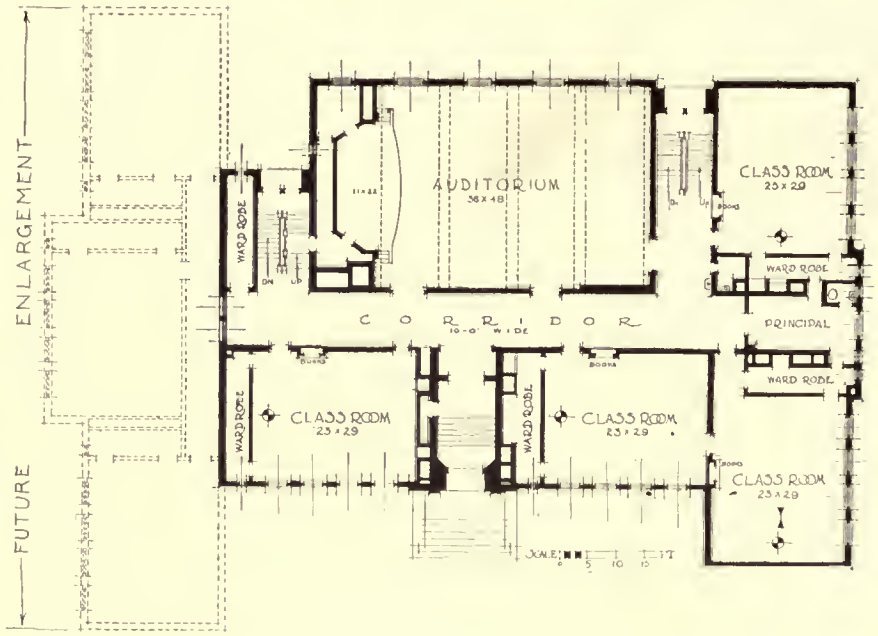

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VOL. CXI JANUARY 31, 1917 No. 2145

A SOUND PUBLIC BUILDINGS POLICY FOR THE GOVERNMENT

ALTHOUGH the recent passage of a bill by the House, in which was included some thirty-eight millions of dollars for the construction of public buildings in accordance with the wasteful methods that have governed expenditures for Federal buildings in this country during the past twenty years, would seem to indicate a total disregard of public opinion on the part of a majority of our representatives in Congress, conditions are probably not quite as hopeless as might appear from such action at first glance. As a matter of fact, it is by no means certain that the measure in question will ever become effective in its present form. It is well known that both the Senate and the President have been made to realize the false and vicious principles upon which the bill is founded, and may be expected to be unwilling to accept the responsibility of continuing a practice now thoroughly discredited.

The American Institute of Architects has gone squarely on record as opposed to further raids upon the public treasury in the guise of appropriations for the construction of unnecessary or extravagant buildings on the one hand, and inadequate buildings on the other, but unlike the majority of critics, has proposed a plan to supersede the one criticised. In a recent issue of the *New York Times*, Messrs. C. Grant LaFarge and William Emerson explained the Institute's proposal—which is in effect the appointment of a public building commission—as follows:

> Such a commission as urged by the American Institute of Architects would have as its only purpose an investigation that would enable it to formulate and recommend the wisest public building policy. It should be composed of, let us say, five men—an architect, an engineer, a contractor, a man experienced in problems of real estate, and a man widely experienced in business affairs. It would be their task to discover how the Government might best acquire real estate for building purposes; how the wisest conclusions might be reached in determining whether or not a certain building should be built; how the data accumulated in the Post Office Department, for example, might be used as a basis for the standardization of elements in planning; how the best architectural and engineering services might be obtained. These are, roughly speaking, the salient factors in such an investigation. The best expert advice to be had in the United States should be brought to bear upon them. A sound national public building policy would confer manifold blessings. Its value and usefulness to the nation would be reflected upon the public buildings of our States, our cities, and our towns. As a nation we compare most unfavorably with all others in the methods by which we approach such undertakings.
>
> The American Institute of Architects has laid little stress upon the question of architecture. It believes that the best architecture is possible only when the fundamental business basis is made right. As to the value of expert advice in studying problems of this character, the commission which recently studied questions pertaining to the heights of buildings and districting in the City of New York is a valuable case in point. The work of this commission shines forth as a signal example of what the expert can do when unhampered by selfish or political considerations. While politicians and Government officials look askance upon expert service, yet such service is sought and employed by business men everywhere, and the largest corporations in our country do not hesitate to go outside their own personnel and employ the best expert advice obtainable for the

solution of any particular problem. In seeking such a commission as is urged for the study of the public building problem, the President of the United States would have before him for choice men of unexampled ability, integrity, and experience. Into the hands of such a commission the American Institute of Architects earnestly urges that the entire public building question be committed.

It would seem that the essence of this whole plan is merely the application of the now generally accepted theory that a lawyer can give better advice on questions involving the interpretation of the law than can a farmer, and that a physician may with greater wisdom and propriety be consulted in the case of illness than a shoemaker. In other words, since the most successful corporations and individuals employ experts outside of their own personnel to pass on questions concerning which they do not possess, in the nature of things, expert knowledge; the same principle might, with promise of the most gratifying results, be applied to Congress or any department of our government. There is no reason for believing that members of Congress are qualified to pass on these technical questions with greater intelligence than the agriculturist could pass upon complex questions of law, and to continue the archaic practice that has heretofore obtained is indefensible from any point of view except political.

The tentative suggestion made by Messrs. LaFarge and Emerson, concerning the personnel of the proposed commission is, of course, undoubtedly right in principle, but would seem to be too restricted in scope. In other words, if the commission contained but one architect, one engineer and one member experienced in the business of real estate, there would be but one expert in each line, and questions relating directly to these several phases of the subject would then be determined by but one mind, other members of the commission being, in effect, laymen, as far as the determination of these special matters was concerned. Of course, this is but a detail of the plan, and if it seemed desirable the commission could readily be enlarged sufficiently to include sub-committees of experts in the various lines indicated, including perhaps four or five members in each case.

Just what the function of the builder would be on a commission charged with the duties outlined is not entirely clear. Perhaps he is included merely as a concession to the popular impression, which still obtains to some extent, that a builder, being a man with a practical knowledge of everything pertaining to building, acts as a balance wheel to the machinery set in motion by the more visionary and theoretical architect, or even engineer. Or has the theory that architects are necessarily impractical and must be prevented in some way from undertaking or proposing plans that are too visionary been preached to them till they believe it themselves?

INDUSTRIAL HOUSING—PART II

By LAWRENCE VEILLER

Secretary, National Housing Association, New York City

THE $15 A WEEK MAN

WHEN it comes to the question of housing the unskilled laborer earning on an average $15 a week we find that there is a housing problem and that there are many questions that require the most careful consideration. So true is this that many housing reformers feel that it is the only housing problem and constantly give vent to that feeling by brushing aside the consideration of every other question, saying in effect: "All that is of no moment, but what about the man who earns $15 a week? How are we to house him?"

That he can be housed satisfactorily, and must be so housed, there can be no question. That he is not housed satisfactorily to-day is equally obvious.

Most of us would like to see this type of worker living in as fine a house, with as much space, as many rooms, with all the conveniences and in the same type of single-family, detached dwelling as the higher paid skilled worker can afford.

Of course this cannot be done. The man of low earning capacity can no more afford to buy the best quality of housing than he can afford to buy the best quality of food or milk or clothing or any other commodity. It would be as reasonable to expect him to be able to afford certified milk at 22 cents a quart as it would be to expect him to afford the detached cottage of the skilled mechanic. Some of us, I regret to say, are inclined to lose sight of this fundamental economic law.

If, then, the unskilled worker cannot be housed in a single-family detached cottage such as his more fortunate co-laborer can afford, the question arises, "What is the type of house that he can afford and what is the best type of house to place at his disposal?"

In some communities, I regret to say that they have answered this question by providing the multiple dwelling and house the unskilled workers in huge barracks or tenements or in the objectionable "three-decker." It has never occurred to them, apparently, that there were any types but these two—the detached, single-family cottage or the tenement.

There is, however, a very excellent type of dwelling that is suited to the man of low earning capacity; and that is, the single-family dwelling built in rows or groups, what in some parts of the country is known as a "terrace."

THE ROW OR GROUP HOUSE

This type of house is the common type of workingman's dwelling, in fact, one may say the universal type, in Great Britain. Where land values are high, where building is costly, and especially where it is necessary to keep down the rent to $15 a month, this is the only type of single-family dwelling in most parts of the country—of course, there are some parts of the country where an exception should be made—that can be built and can be rented at this figure and at the same time return a fair return upon the money invested.

One of the great mistakes we have made in attempting to house this type of worker has been to neglect all considerations of how much land this worker can afford to pay for. In most communities where they have been dividing their property into lots of 25 feet, 40 feet and 50 feet frontage with depths varying anywhere from 100 to 150 or 200 feet—a type of subdivision excellent for men of means and in some cases entirely appropriate even for the skilled mechanic, but quite inappropriate for the man we are now considering—they have gone on and, without thought, have assumed that the workingman earning $15 a week should build a house upon property of this type.

The workingman of low earning capacity can no more afford to pay for more

land or more house than he can afford to use than he can afford to pay for more clothes or more food than he can afford to use. The $15 a week man does not need a house 25 feet wide nor can he afford it.

I realize that there will be considerable dissent from this statement and that to many it will come as a new suggestion and like all new ideas will be keenly resented at first. But students of the problem are quite agreed on this point and find that the best type of house for this kind of workingman is a house of about 15 or 16 feet frontage, two stories high, built in a row or group, containing not more than five rooms and bath and preferably not more than four rooms; with two living rooms on the ground floor and a bath and two or three bedrooms, as the case may be, on the second floor.

Such a house is best exemplified in the ordinary commercially built Philadelphia house, built literally by the hundred thousand in that great city, serving as the habitation of over a million people. In speaking of the Philadelphia house, there are two types which should be distinguished. What is referred to here is the four-room house, and not the more recent type of development, a house with six rooms with an extension on the ground floor.

It is an axiom in housing that no house is "model" that exceeds two rooms in depth. In fact, in Great Britain a house deeper than this is practically unknown. It could not be rented or sold.

How Many Rooms?

How many rooms can the $15 a week man afford to pay for? How many does he want?

This raises a host of novel questions, I appreciate. The writer has personally had this question borne in upon him with considerable emphasis recently through the study of the trend of development in the housing of certain portions of the population of one of our large Eastern cities, where the trend toward a smaller number of rooms has been strikingly noticeable in recent years.

In seeking the causes for that trend it has developed that the average workingman of this type cannot afford to occupy more than four rooms and that usually when he rents or pays for more than four rooms he does not occupy them all, but supplements his income by taking in lodgers or boarders.

It was also discovered that he cannot afford to heat more than four rooms; that his wife, as a rule, especially in these days, with the distractions of moving pictures and other phases of city life, does not wish to take care of more than four rooms. Finally, the furnishing or equipment of more than four rooms proves a burden. Of course in exceptional cases where there are very large families, four rooms are not sufficient. These, however, are the exceptional cases and not the rule.

If one can gage accurately the present trend of social development, families are likely in the future to continue to grow smaller, and to need fewer rooms.

A house of the type we have described can be built complete with outer walls of brick, with cellar, furnace, running water and all modern improvements, even in some cases including electric light fixtures, and sold, including the land and improvements, such as curbing, paving and grading, for $2,000 and can be rented without difficulty for $15 a month, and yield a commercial return. This is what is done in the city of Philadelphia. It is made feasible there by operating on a wholesale scale and building many houses at once.

It is also made possible through the more intensive use of the land which the smaller size lot lends itself to. It is thus possible to get a great many more houses on the same area of land than in the case where a larger unit is employed; and, of course, the cost of the smaller house is also considerably less than that of the larger house.

This is the type of house which has been developed very successfully in a number of so-called "model" dwelling enterprises.

The Schmidlapp houses in Cincinnati, at least the later ones and better ones, are of this type. The houses recently built by the Octavia Hill Association in Philadelphia are of this type, as are also those

of the Improved Dwellings Association in New Haven.

Most people when they hear the suggestion that houses should be built in rows or terraces seem to think that there must be a stereotyped monotony to the buildings.

This is of course quite unnecessary. It depends merely upon the artistic taste, ingenuity and skill of the architect. He can vary his types of architecture just as easily with the row house as he can with the detached house.

A happy medium between the two and a plan which lends itself very easily to artistic treatment is the "group" house. That is, the row house broken up into groups of three or five or seven or nine or eleven, as may be desirable.

A treatment which gives variety and is pleasing to the eye is a skillful variation of groups of this kind, having a group of three houses intervene between two groups of seven or five houses, etc. Such a treatment has been worked out for years in the case of the English garden suburbs and is very well exemplified in Mr. Grosvenor Atterbury's treatment of the Forest Hills development of the Sage Foundation, built for a different class of people, however.

The Two-Family House

Where land values are so high that it is not possible to house the workers in single-family houses even of the row or terrace type such as have just been described, it is still not necessary to resort to the tenement or "three-decker," for there is another type of house that is infinitely better than either of these. That is the two-family house. This is of two types—the so-called "double house" or semi-detached house, which is nothing more nor less than two single-family dwellings of the cottage type, with light and air on three sides instead of four, one side of each house being a party wall common to the two.

This is well exemplified in the very attractive houses constructed a year or two ago in Salem by the Salem Re-Building Trust. It is a splendid type of house for the workingman and even a good type for the skilled mechanic, though, as a rule, it is better for him to have a completely detached house.

The other type of two-family house, sometimes called the "two-flatter," is frankly a multiple dwelling, but of the least objectionable kind, for it is only two stories high and contains but two families, one upstairs and one down, with separate entrances, with separate cellars and oftentimes with separate back yards.

Such a house has few of the objectionable features of the tenement, for nothing is used in common except the foundations and the roof. Houses of this type are well exemplified by the buildings of the Washington Sanitary Improvement Company developed by the late General Sternberg. As a rule, they are built in rows and should contain practically the same number of rooms as it would be deemed wise to provide in the single-family dwelling of the terrace type, namely, four rooms and bath, or at the most, five rooms and bath.

Such houses, however, cannot have the great advantage which the Philadelphia house has, of being but two rooms deep. In order to get the necessary number of rooms for each flat it becomes necessary to build the building deeper and this means practically a series of courts for the lighting of a certain number of the rooms. No housing plan which contains this feature can be deemed either model or desirable. It is at best a compromise and should be frankly recognized as such.

(To be continued)

VIEW IN AUDITORIUM LOOKING TOWARD EXHIBITION ROOM

BUILDING OF ARTS AND CRAFTS SOCIETY OF DETROIT, MICHIGAN

SMITH, HINCHMAN & GRYLLS and WILLIAM B. STRATTON, *Architects*

IT IS significant of the awakening interest in the development of craftsmanship, particularly those branches which are allied to architecture, that in cities throughout the country there should be springing up societies of men and women who, while engaged perhaps in occupations outside the field of the arts, are yet so deeply interested as to spend both time and money in furthering the arts and crafts propaganda.

A case in point is the Society of Arts and Crafts in Detroit, whose new building is illustrated in this issue. This building affords substantial evidence of what may be accomplished by a united and forceful effort in the right direction. We learn that it is less than ten years since a coterie of men and women laid the foundation, and in a very humble way, of this important movement in Detroit. We are referring to this somewhat at length, as affording a suggestion of an example which we believe is worthy of emulation in other localities.

As will be noted by the illustrations, this building in Detroit is admirably adapted to its purpose, both in its architecture and its planning. It is more than a shop, something more than a store; it is, in fact, a social center where people of congenial tastes may congregate, and where there is afforded a mart for the inspection and purchase of the various

craftsman products, whose making has been stimulated by a very practical method of encouragement.

The building is of masonry construction with stucco exterior, its gabled and dormered roof covered with tile. On the ground floor there is a large exhibition room, the walls being finished in wood, with high windows and deeply recessed doorways. There is an unusual fireplace, an archway entrance to the street. Instead of the usual proscenium arch, there is a square-corner opening. Statuary and hangings adorn the walls, and the seats, instead of being of a monotonous sameness of color, are brilliant in many hues of stain. All the surroundings are such as to cultivate the sensibilities to something different from the ordinary in the dramatic offerings.

AUDITORIUM SHOWING STAGE OF "LITTLE THEATER"

two metal columns of spiral design standing at the sides. Odd nooks have been provided, and in these are cabinets or shelves bearing bronzes. Tapestries are hung upon the walls and the exhibits of craftsman products are shown on massive tables. In a deep wall bookcase are handsome bound volumes in rare bindings and pottery is set on silken covers upon the tables.

The theater opens out from the main exhibition room and both rooms are connected with the courtyard, which also has

The second floor of the building contains another large exhibition room and also the balcony of the theater. A kitchen on the first floor provides refreshments on special occasions and also luncheons held in the courtyard during the summer.

This courtyard is paved with stone flagging and one side is overhung by the projecting eaves of the main building. On the other side are the individual shops of the craftsmen. Each of these has been painted and decorated differently so that the ensemble effect is excellent.

With their unusual surroundings, each artisan or artist has the opportunity to labor in a most congenial place.

The idea upon which the Society of Arts and Crafts was founded is that of making beauty to exist with the aid of humble materials. The cultivation of design through hand work and the finding of a market for objects of art and utility through collective effort has been accomplished here to even a greater degree than could have been anticipated ten years ago.

Inasmuch as the arts and crafts movement is a world-wide one, the Detroit society is united with like societies in other cities and other countries in carrying out its ideals. Wares are brought here from elsewhere for exhibitions and Detroit craftsmen find a like chance to exhibit their products in other cities through the same kind of co-operation.

The Proposed Washington State Law to License Architectural Practice

The Washington State Chapter of the Institute is exerting much effort to secure the passage by the State legislature of an adequate law to regulate the practice of architecture.

The campaign of publicity being waged serves a two-fold purpose;—it arouses public interest in much needed legislation, and it also serves to educate the layman as to the important part that the architect plays in the community.

Washington, D. C., Chapter A. I. A.

At the annual meeting of the Washington, D. C., Chapter of the American Institute of Architects the following officers were elected:

President, Waddy B. Wood; vice-president, Percy C. Adams; secretary, Robert Lester Macneil; treasurer, Thomas A. Mullett.

A campaign of education among the laity is one of the important activities contemplated in the future.

Personal

Edgar A. Matthews, president of the San Francisco Chapter, is sojourning in the East, together with other members of the San Francisco delegation to the recent convention.

Messrs. G. Jacques & Co., architects and engineers, of West Windsor, Ont., have recently moved their offices to The Peninsula Security Building on Chatham Street, that city, and would be glad to receive manufacturers' samples and catalogs.

Mr. E. O. Damon, architect, Fort Dodge, Iowa, has admitted Mr. P. M. O'Meara into full partnership. The firm will continue the practice of architecture at the same address under the name of Damon & O'Meara.

It is announced that the partnership existing between Messrs. McLaughlin & Johnson, Architects, Lynchburg, Va., has been dissolved, Mr. Johnson retiring from the firm. Mr. McLaughlin will continue the practice at Suite 511, Peoples Bank Building, that city.

Mr. W. B. Faville of San Francisco, a director of the American Institute of Architects, at the request of the Washington, D. C., Chapter delivered an address before that body on December 18. His subject was the "Architectural Features of the San Francisco and San Diego Expositions."

Messrs. Howells & Stokes, architects, announced that on January 1st, 1917, the New York partnership was discontinued, and that the members of the firm will continue the practice of architecture as follows: Mr. John Mead Howells, 470 Fourth Avenue, New York City; J. N. Phelps Stokes, 100 William Street, New York City; Messrs. Howells & Stokes, Seattle, Wash.; New York Office, 100 William Street.

COURTYARD, DAVANZATI PALACE, FLORENCE

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, FEBRUARY 7, 1917 NUMBER 2146

INTERIOR, DAVANZATI PALACE, FLORENCE

THE PALAZZO DAVANZATI, FLORENCE

By RICHARD FRANZ BACH

THE recent disposal of the art property of Professor Elia Volpi prompts a brief consideration of the fine old Florentine mansion, which under the name of the Davanzati Palace so long provided accommodations for the richest collection of examples of Italian Renaissance art that has ever been brought to this country. The building is assigned to the *Quattrocento*, the fifteenth century, when palace architecture in the mother city of the arts was approaching its zenith; it was built by the ancient clan of the Davizzi, passed from them to the Bartolini in 1576 and ultimately came into the possession of the Davanzati, a family long intimately connected with the history and growth of Florence and contributing many *gonfalçonieri* and other civic officials to its government. In 1904 Professor Volpi purchased the palace, chiefly to provide a

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splendid stamping ground for his antiquarian proclivities. In the space of five years he restored the palace within and without, from cellar to loggia, walls, frescoes, even inscriptions, to its pristine Renaissance quality and atmosphere, and

FIREPLACE BY MICHELOZZO, DAVANZATI PALACE, FLORENCE

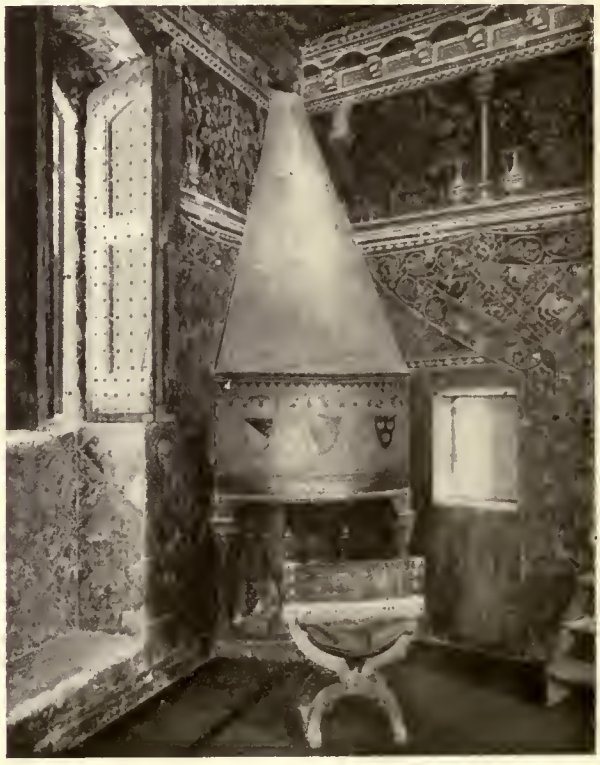
his work was universally acclaimed a distinct success, even receiving the unqualified approval of Doctor Wilhelm Bode of Berlin, whose authoritative position as a student, historian and critic of the Italian Renaissance is beyond question.

Not satisfied with his architectural restoration alone, Professor Volpi provided the building with its natural complement, a collection of original pieces of furniture of corresponding date of execution, likewise paintings, bronzes, sculpture, wrought iron, terra cottas, stuccos, majolica, rugs and tapestries, as well as linens and laces of surpassing excellence of workmanship. It is the sale of this unique collection augmented by parts of that, housed for some time within the Villa Pia, another of Professor Volpi's adventures in restoration, that gained in recent weeks such widespread attention among connoisseurs and historians.

* * *

From the fine array of three large arched openings at the street level the whole façade rises in sedate majesty through three tiers of windows with segmental heads, to an open loggia or gallery surmounted by a cornice of characteristically deep projection, the whole of this upper story giving the lie to the otherwise formidable and military elevation.

Following the Florentine practice the lower story of the palace is of rusticated stone reduced to a uniform surface in the main story or *piano nobile* while the upper stories of the front are finished in brick. The feeling of the whole is one of grace and distinctly conveys the motif of a broad tower, due largely to the compara-



FIREPLACE, DAVANZATI PALACE, FLORENCE

tively narrow street frontage, and differs decidedly in this respect from the type of effectiveness studied in the Strozzi, Riccardi, Guadagni, Rucellai, Pitti and other well known *palazzi* in Florence.

A monumental cartouche—supposedly by Donatello—forms a central motive or

PALAZZO DAVANZATI, FLORENCE

focal point for the eye and relieves the unfinished appearance of the ends of the façade, a defect which is so often found, and in many cases necessarily so, in these and a host of other buildings that are permitted expression on one face only.

An interesting sidelight on contemporary life is given by the numerous metal accessories. In front of each line of windows was bracketed a wooden pole upon

CHAMBER, DAVANZATI PALACE, FLORENCE

metal hooked supports or arms projecting from the wall at the sides of the windows. No doubt this arrangement served for hanging drapery on festal occasions, family ceremonies or municipal holidays, and may also have been used in silk drying, for the silk industry was of considerable importance in this quarter of Florence. It may be said that the character of such a building is not complete if this occasional, perhaps even fairly frequent, additional color motive is lost sight of; by means of rich textiles the frowning aspect of the building is softened and animated, for features of this type must be construed as part of the truthfully colorful rendering of such a façade, an essential element of the setting which it dominates. At the sides of all windows and doorways are inserted metal hooks which may have been used as fastenings for textiles or for torches, while on the ground level, between the doors appear iron hitching rings and at one corner a lamp bracket, no doubt to light the tiny alley or *ruelle*, that connects the Via Porta Rossa with the broader Via Capaccio behind the palace.

That the medieval character long clung to Renaissance structures is apparent from the first view of the interior of this building. In fact, the all too frequent need for defense in this and similar buildings of the time must be considered

a distinct reason for their massiveness and their often unfriendly appearance, while the long retention of crenelations, battlements, heavy metal gates, and forbidding unbroken walls—the latter even occasionally sloping or battered at the base of the building—further emphasizes their response to the tradition of a common military ancestry, namely, that of the castle of the feudal noble. In the vault of the courtyard capitals, some bearing portrait heads supposedly of members of the Davizzi and Davanzati families, and set upon five octagonal columns; likewise also by the attractive handling of a carefully limited number of mouldings and other details carved in stone.

The interior presents an aggregation of notable halls and smaller rooms, profusely decorated with mural frescoes—

CHAMBER, DAVANZATI PALACE, FLORENCE

above the entrance passage will be found holes for pouring hot oil or other missiles upon a successful intruder; the very existence of such provision for self defense in a city residence of this time invites vivid conjecture as to the exigencies of contemporary life, even in splendid Florence with its fully developed municipal culture. This ominous suggestion is rendered practically void by the remarkably successful courtyard and stairway treatment beyond; as well also by the variety in the restoration of which Professor Volpi relied upon the skill of Silvio Zancchi—sometimes as simple regular patterns, sometimes in imitation of textiles hung upon the walls, whose upper reaches are treated as ornate borders, occasionally with painted architectural motives in addition to those of actual projection that form the apparent supports of ceiling beams. The mural schemes are suggested by such names as the Parrot Room and the Peacock Room. There are also finely

restored wooden ceilings with heavy painted beams. Small shrines or tabernacles—the work of a round dozen of well-known sculptors and modelers in stucco,

CAPITAL IN COURTYARD, DAVANZATI PALACE, FLORENCE

including Jacopo della Quercia, and ceramists, including Giovanni della Robbia—are set into a number of the rooms, which latter are also provided with simple fireplaces, with the exception of that in the principal room on the main floor which presents an ornate composition of *amorini* with festoons, the whole ascribed to Michelozzo Michelozzi.

It should be a matter of no small regret that this loss in the art world must likewise be credited to the demands of the war of all Europe. The Davanzati palace is despoiled of its mobiliary decorations, but we are not informed as to the prospective fate of the building itself, its ceilings and its frescoes. It is hoped that these at least may be spared, even in these troublous times, through the agency of the Italian government, which has thus far nobly carried out the work of restoring and preserving a large number of the many

CAPITAL IN COURTYARD, DAVANZATI PALACE, FLORENCE

monuments that constitute the enviable heritage of the mother country of the Renaissance.*

*The writer is indebted to *Les Arts*, for August, 1911, for the illustrations to this paper.

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AN EXTERIOR DETAIL

DETAIL, BOULEVARD ELEVATION

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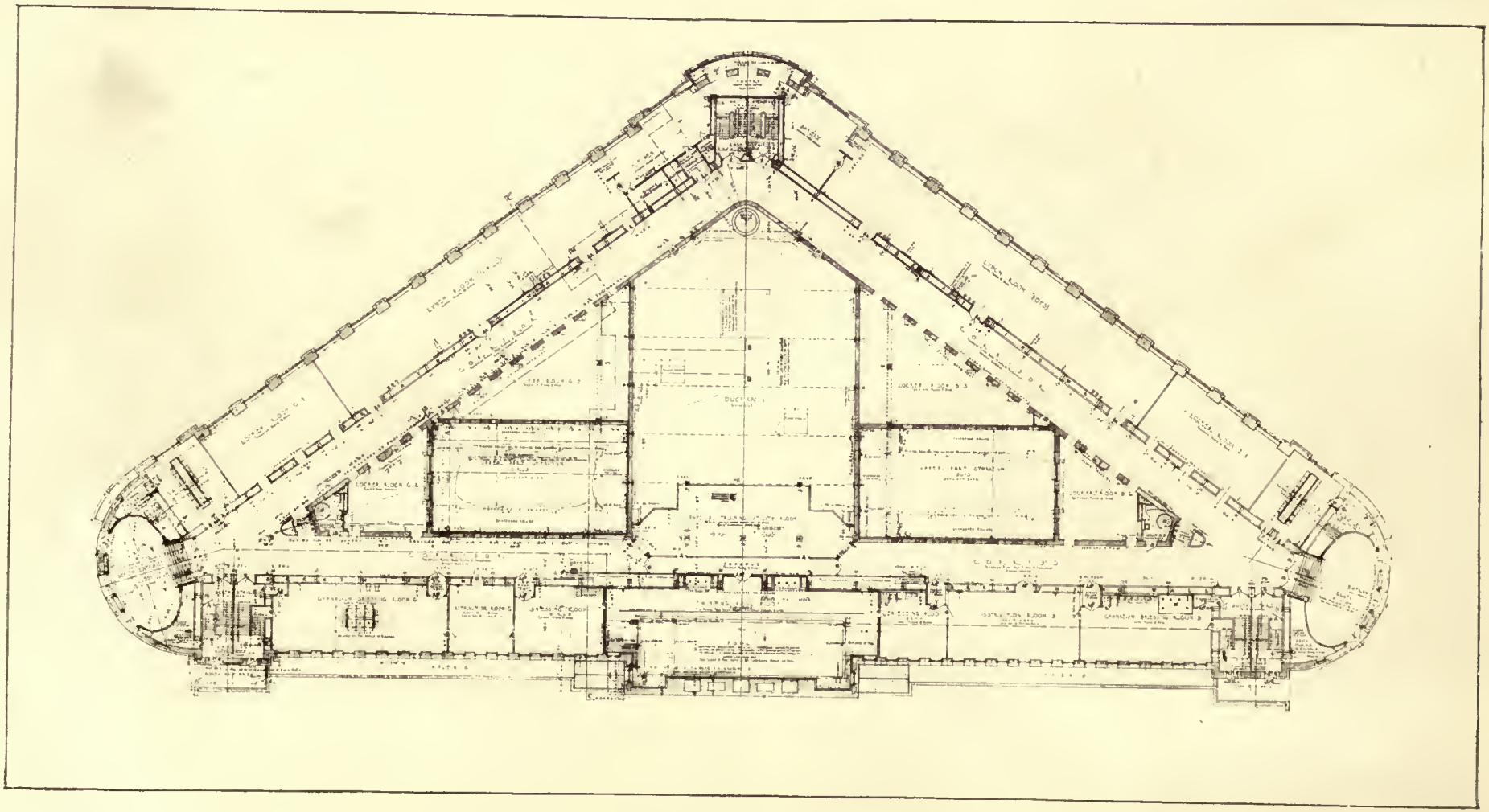

GROUND FLOOR PLAN

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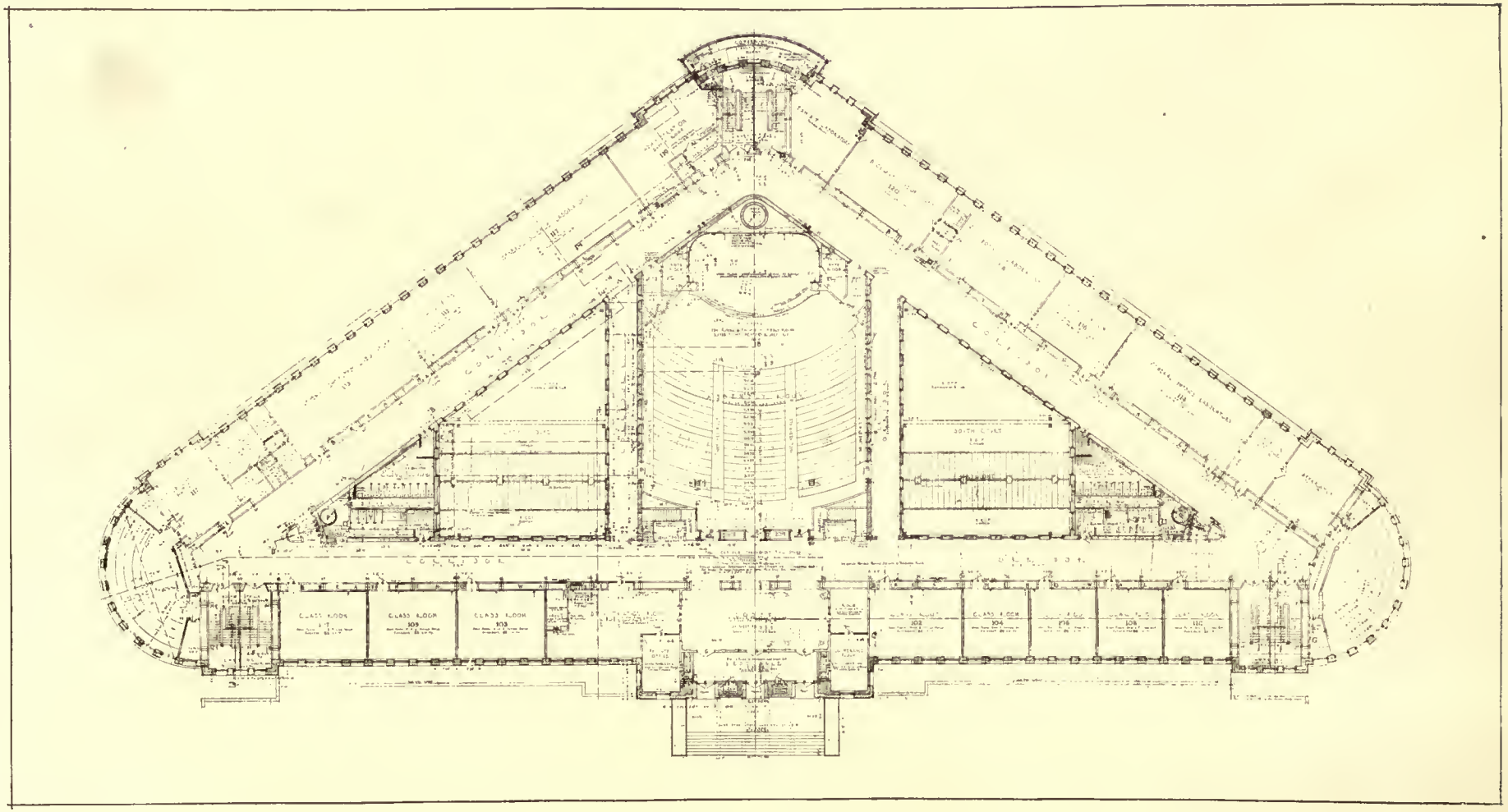

FIRST FLOOR PLAN

SCHENLEY HIGH SCHOOL, PITTSBURGH, PA.

MR. EDWARD STOTZ, *ARCHITECT*

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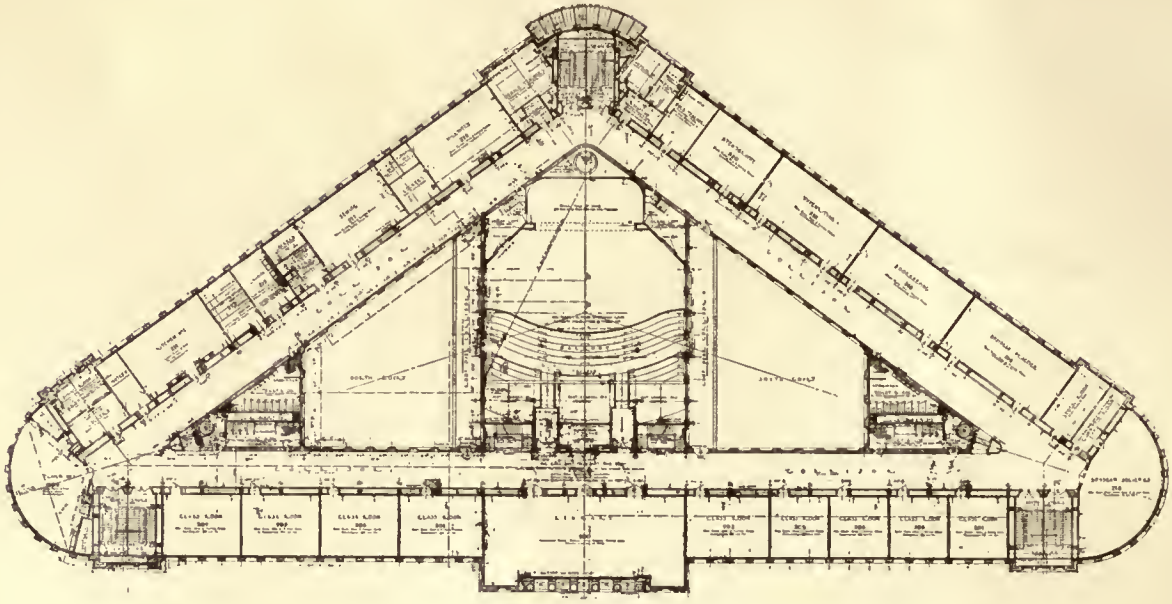

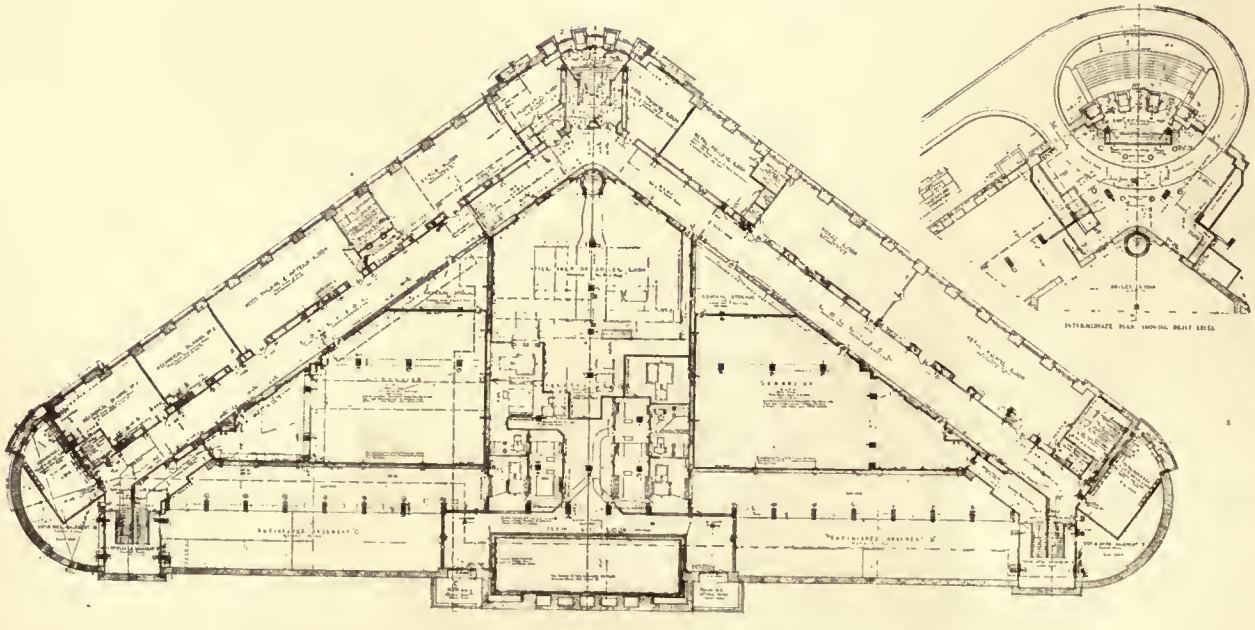

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ASSEMBLY ROOM

LOBBY

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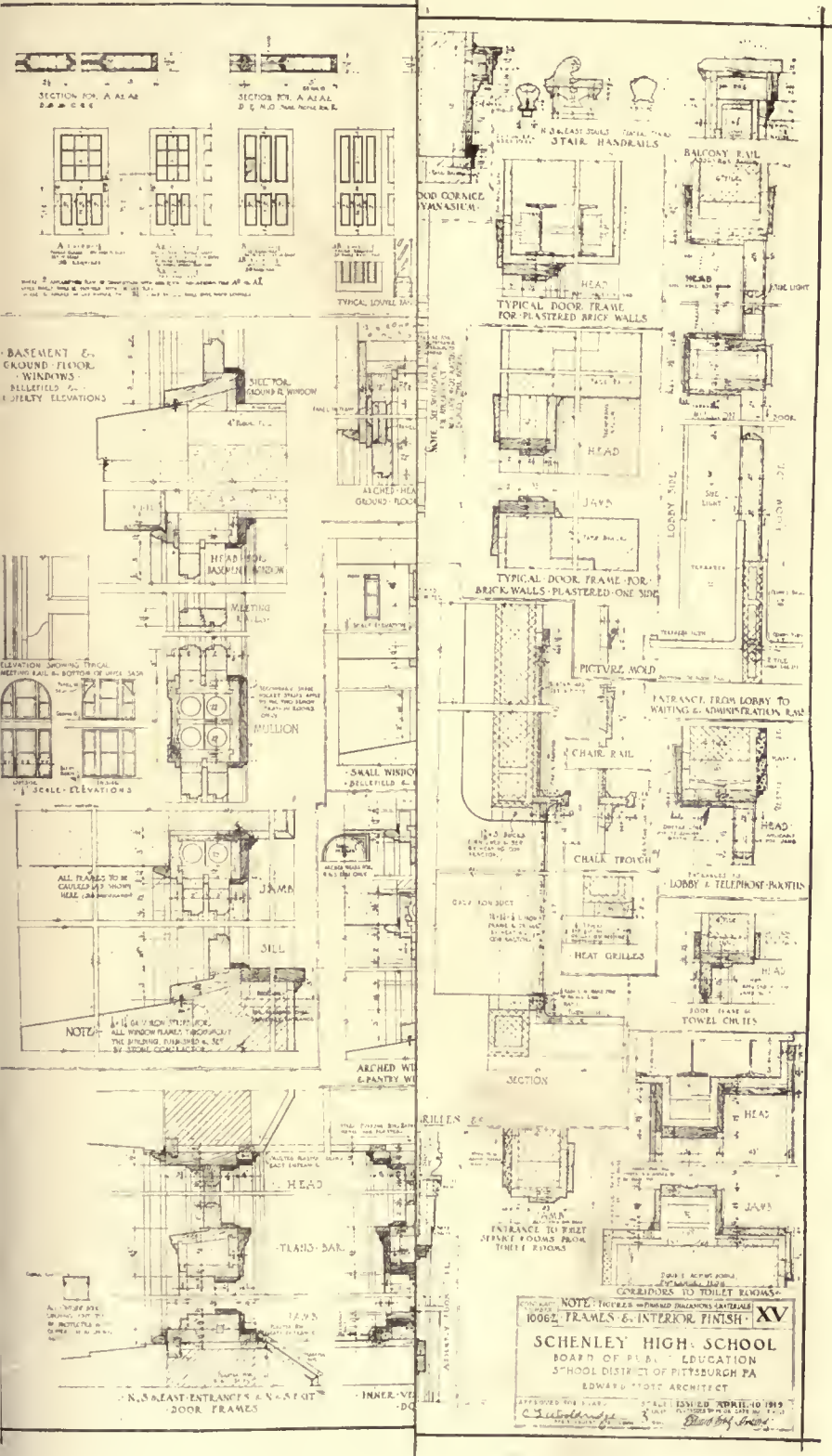
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STAIR HANDRAILS
BALCONY RAIL
TYPICAL DOOR FRAME FOR PLASTERED BRICK WALLS
HEAD
JAMB
TYPICAL DOOR FRAME FOR BRICK WALLS PLASTERED ONE SIDE
LOBBY SIDE
PICTURE MOLD
ENTRANCE FROM LOBBY TO WAITING & ADMINISTRATION RMS
CHAIR RAIL
CHALK TROUGH
LOBBY & TELEPHONE BOOTHS
HEAT GRILLES
TOWEL CHUTES
SECTION
ENTRANCE TO TOILET SERVICE ROOMS FROM TOILET ROOMS
CORRIDORS TO TOILET ROOMS
BASEMENT & GROUND FLOOR WINDOWS
SILL FOR GROUND FL WINDOW
HEAD FOR BASEMENT WINDOW
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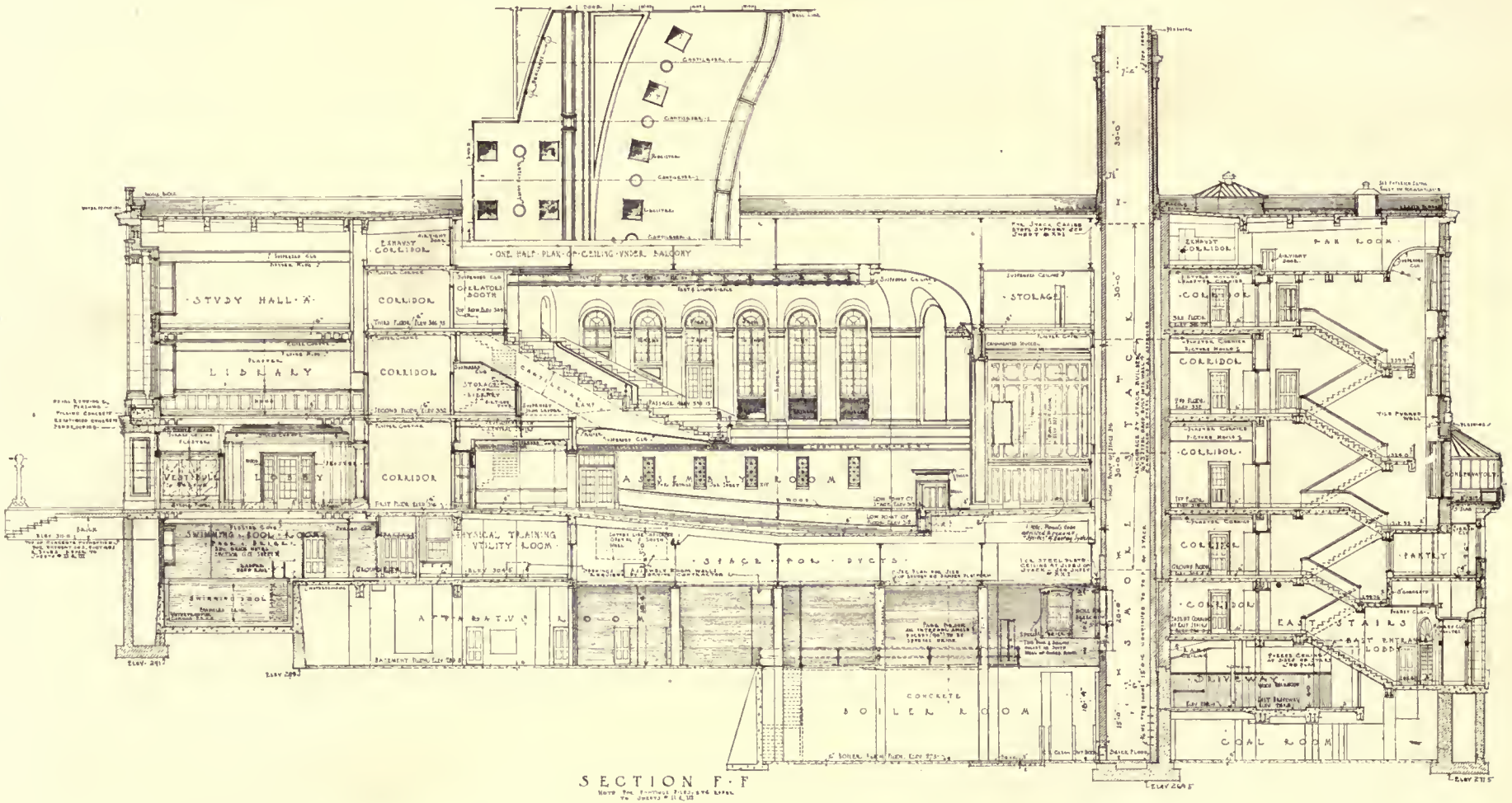

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GUNCKEL SCHOOL, TOLEDO, OHIO

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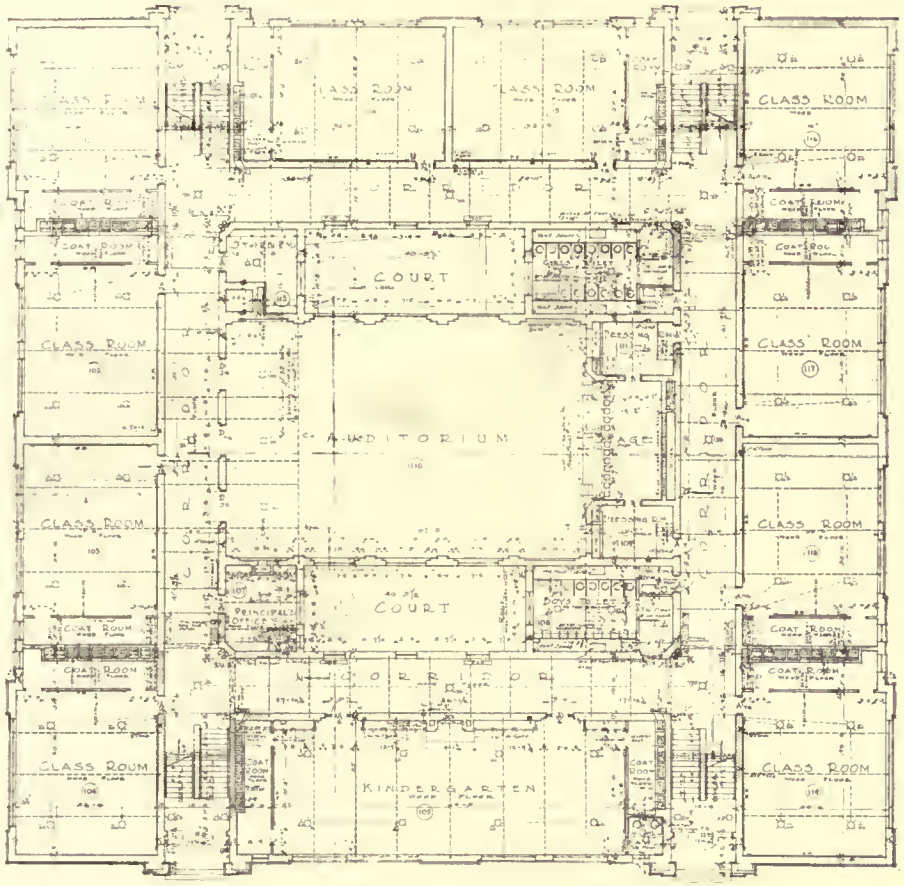
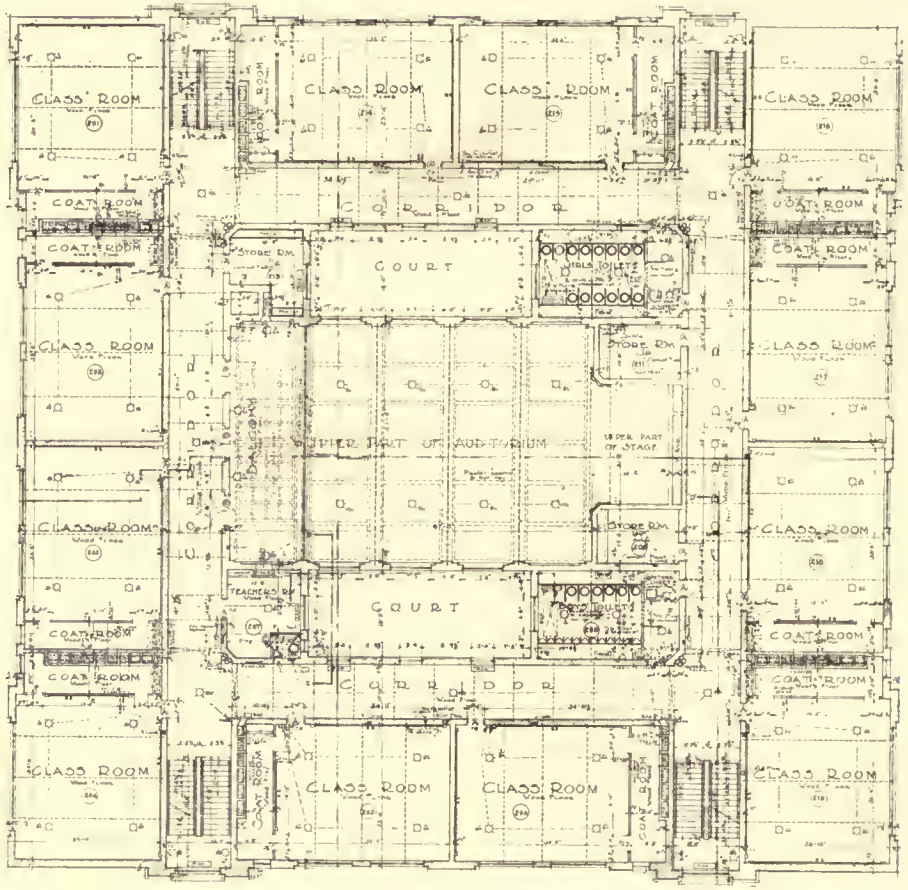


FIRST FLOOR



SECOND FLOOR

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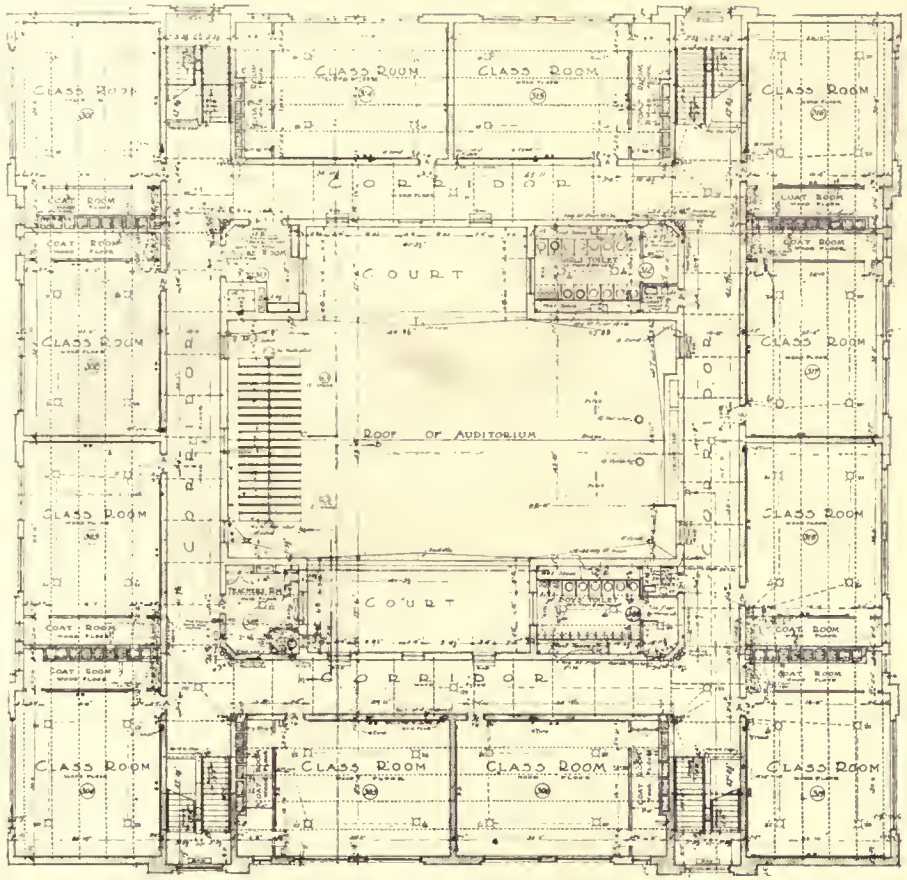
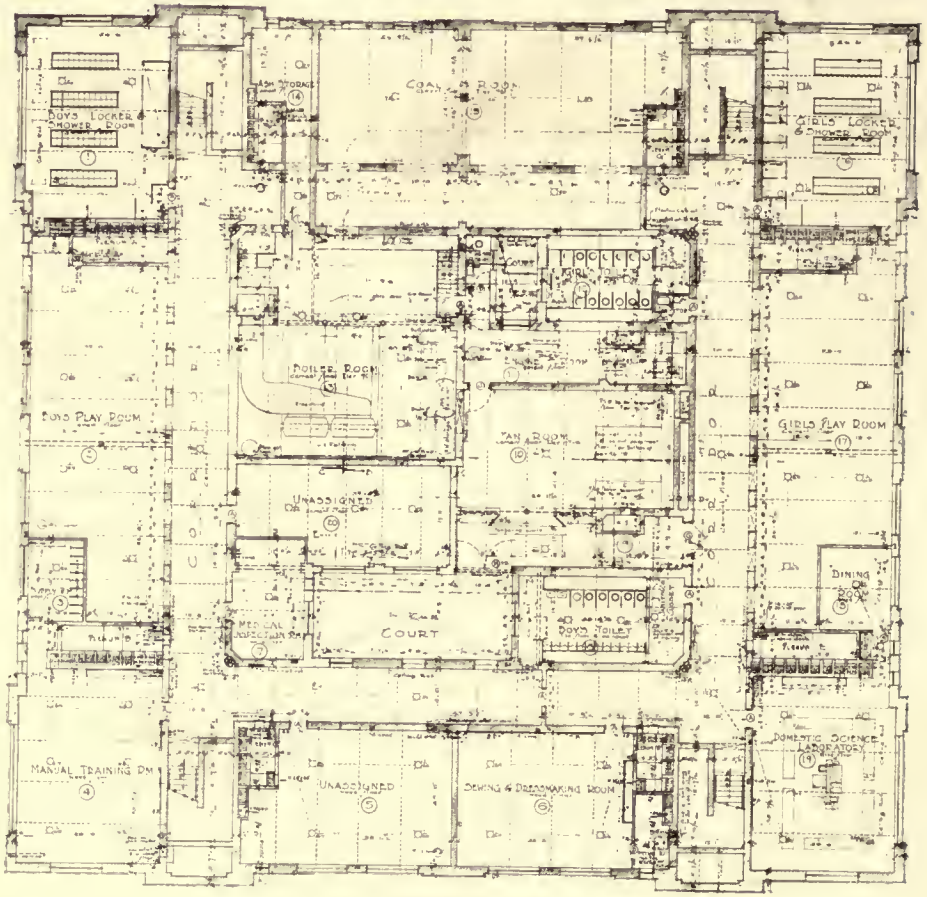


THIRD FLOOR PLAN



BASEMENT PLAN

GUNCKEL SCHOOL, TOLEDO, OHIO

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VOL. CXI FEBRUARY 7, 1917 No. 2146

A PROPOSED LAW AFFECTING THE PRACTICE OF ARCHITECTURE IN QUEBEC

IF a bill now pending before the law-making body of Quebec, Canada, becomes law, it will place the control of the practice of architecture in the hands of the representative architectural association. Specifically the proposed law makes it impossible for any person to act as an architect without being a member of the Province of Quebec Association of Architects.

Commenting on the situation giving rise to the measure, and reciting its salient points, *Building News* of London states as follows:

> The association objects to any person calling himself an architect without being a member, and legal action has been several times taken, under the Act constituting the association, against persons alleged to be practising illegally. A recent judgment of the Court of Review, however, proved unfavorable to the contention that persons acting as architects are bound to be members of the association.
>
> The object of the Bill is to remedy the defect, and the measure is also aimed at persons outside the association, including engineers, who design buildings, particularly industrial plants, work which it is claimed is wholly within the architectural sphere. The wording of the Bill is very comprehensive and apparently will prevent contractors from building for proprietors without an architect being consulted. No one who is not a member of the association may act as an architect "directly or indirectly" without incurring penalties named in the Bill, a provision which, on the face of it looks as if it will affect the hundreds of small contractors who build without calling in an architect.
>
> The Bill gives the Council of the Association discretion to admit to its membership all members of associations of architects in the other provinces of Canada, also members of the Royal Institute of British Architects, and of foreign associations of architects of equal standing on their presenting their credentials.
>
> Architects, not members of the associations, who shall have practised for five years, shall be admitted without serving as students, but shall be required to pass the final examinations.
>
> No person shall take or make use of the name or title "architect," either singly or in connection with any other word, name, title or designation, nor act as such, either directly or indirectly, unless he is registered as a member of the association.
>
> It is further provided that anyone who, not being registered as a member of the association, takes or makes use of any such name, title, or designation, or acts as architect either directly or indirectly, shall be liable to a fine not exceeding $25 for the first offence, and not exceeding $100 for every subsequent offence, and, in default of immediate payment of the fine and costs, to imprisonment for not more than ninety days, unless such penalty and costs be sooner paid.

It is doubtful if the most arrogant labor union ever possessed the assurance to propose a more monopolistic measure, and it is inconceivable that the citizens of the province will submit to the absolute domination of the construction work of the country by an association. Under such a law the charge that an architects' trust existed now frequently made by politicians and even employers of architects who profess to see in the adoption of a uniform code of ethics and schedule of minimum charges indications of an illegal agreement would be to a very great extent, justified. The idea of monopoly is repugnant to art, and any tendency in that direction has been carefully avoided in the majority of license

laws enacted in the several states of this country. We have heretofore commented on the desirability of a uniform law for all the states but such a measure should not place the practice of architecture in the hands of any association or society where an abuse of power might readily result in individual cases of discrimination and injury affecting those qualified to practice architecture, as well as the public in general. To delegate the control of the architectural development of a country or state to a self-constituted body of men would not only violate one of the first principles of progressive government, but would in effect reduce a noble calling to the level of trade unionism.

A PROPOSAL CALCULATED TO LOWER THE NATIONAL STANDARDS OF ART

A PERSISTENT rumor to the effect that a movement is on foot having for its object the transfer of Shadow Lawn, the estate occupied by President Wilson during the summer of 1916, to the Government to serve as a permanent summer capitol of the United States, has been in circulation for the past month. As long as no definite steps in this direction were taken, there was little that could be done, but now a report comes from Washington that makes it look as though the promoters of the project were serious in their proposals. In fact, Representative Scully of New Jersey has introduced a resolution in the House that, if successful, will result in the eventual utilization of this property for the purpose indicated.

As far as geographical location of this estate is concerned, there could be little said in the way of adverse criticism. Probably, also, the suggestion that each president be permitted to select the climate and environment that best suited his fancy during the vacation months, as presidents have done heretofore, need be given but little thought or attention. As long as the country designates the residence of its presidents for the greater part of each year, it could also, probably, with equal propriety, do so during the summer seasons, if it seemed desirable. But there is another and more serious objection to the selection of the property under consideration for this purpose. It is its total lack of architectural qualities. Surely, the Government should have some interest in the cultural effect of its buildings on the public. It is humiliating enough to have the chief executive of a nation select—even on his own responsibility—a temporary home that in its structural formation and ornamentation outrages every principle of art, but to give governmental sanction to such a selection by acquiring the property and making it one of the most prominent in the country would indicate a retrogression in our artistic ideals that approaches decadence. From Mount Vernon, the White House and the Capitol to Shadow Lawn! Could better evidence of our complete cultural collapse as a nation be imagined?

It would seem that the Commission of Fine-Arts now has presented to it an unequalled opportunity to render a service to the entire country.

SO-CALLED "PARROT ROOM," DAVANZATI PALACE, FLORENCE

Comment on a Suggested Innovation in Teaching Methods at Universities

The Architect and Contract Reporter of London, discussing the proposal to introduce correspondence teaching at Columbia University, states:

"There is a proposition on foot that a radical innovation in university teaching should be introduced at Columbia University, U. S. A. We see no reason why correspondence teaching should not be part of the work of a university, as long as it is distinctly recognized that this method is inferior in value to that of *viva voce* teaching, with its inestimable advantage of personal contact between tutor and pupil. Dr. J. C. Egbert, formerly Professor of Latin at Columbia, and at present its Director of Extension Teaching, recommends this innovation in his annual report. He argues that offering courses by mail is part of the legitimate functions of a modern university, in spite of the fact that it has 'long been considered the particular domain of private institutions, which have exploited such instruction for pecuniary gain.' He urges that Columbia shall adopt this method on the same basis as that of its *viva voce* classes—that is to say, without any idea of making a profit thereby, but at cost price or even less than cost. It is reported that Professor Egbert will have to overcome a considerable prejudice against his proposal; but the success of his extension plans for democratising the work of the university is likely to count ultimately in his favor."

INDUSTRIAL HOUSING—PART III

By LAWRENCE VEILLER

Secretary, National Housing Association, New York City.

THE HOUSING OF THE SINGLE WORKER

ALL that has been said heretofore has had reference to the housing of the man with a family. What about the single worker? How is he to be housed?

We all know how he is housed in most manufacturing communities. He lives as a lodger or boarder or as one of several lodgers or boarders in the home or flat of some other workingman. The evils which flow from this method of living are too well known to require comment here. They have been discussed again and again for many years. I regret to say that thus far in this country that is all that has happened and the lodger problem still remains the great unsolved phase of America's housing problem. The time is rapidly approaching, however, when that problem will be grappled with.

The other method of housing the single worker is to house anywhere from 20 to 100 men in barracks or "bunk houses," as they have come to be called, with a boarding-house boss, a man and his wife and such children as they may happen to have, living on the premises and "looking out for them"; the wife, as a rule, doing the cooking for this vast number of men and rapidly wearing herself out.

The men, as a rule, are housed in huge dormitories, with anywhere from 20 to 50 men in a large single room, sleeping on cots or in bunks in the way that is so common in the lower class lodging houses of our great centers of population. In the worst of these bunk houses there are double-deckers, or one tier of bunks above another. This, however, is not the customary condition but the exception.

"WAREHOUSING" THE WORKERS

That this method of housing men is neither sanitary nor decent is too obvious to require comment. It is not the housing of workers, but what someone has well described as the "warehousing" of workers. It gives rise to a host of sanitary evils as well as social evils. The men do not rise from their night's sleep refreshed as they should be, nor can they go to their work in the morning in the physical state that they ought to be in, after spending the night in a room filled with twenty or thirty other men, with inadequate ventilation—for if one man wants a window open another man wants it shut—in a close and stifling room containing the body odors of twenty or thirty other men.

These are the conditions under which they sleep. The conditions under which they eat are almost, as a rule, equally objectionable. One might really say that there are no conditions under which they *live*, for their life is mere existence—excessive toil at their work, food, sleep. So far as any real social life is concerned there is little opportunity.

I am referring now to the workers and the average conditions of living in the usual bunk-house in the usual industrial community, not to those communities where intelligent employers of labor have provided bathing and recreational facilities and social opportunities for their men. The number of employers who are doing this is, I am glad to say, increasing each year.

But the point that I am trying to emphasize is that in the homes of these men there is no opportunity for even ordinarily decent social life.

It is not strange, therefore, that the average foreign worker who lives under these conditions spends his leisure, as they often do, in drinking and gambling. What else is there for him, when we come to think of it?

It is this type of habitation that to my mind constitutes the chief feature of the problem of industrial housing to-day. I regret to say that thus far little or nothing has been done toward its solution. We do not as yet even know what is the best type of bunk house or lodging house. How large a unit is it safe to develop from the social point of view; in other words, how many men can we wisely house in one building without too much social friction? And on the other hand, how small a unit can be economically developed without undue overhead charges?

What Is the Best Type?

Is it feasible to do away entirely with the dormitory or bunk house type of building? Can we from the financial point of view provide each worker with his own private room in which he shall have adequate light and ventilation and sufficient space to provide him with his bed, a chair and table and the usual things that a man needs in his room?

In other words, can we wisely advocate the doing away not only with the bunk house, but also with the cubicle and insist that single men have a right to light and air in their rooms as much as men with families?

I for one am convinced that the time has come when we must absolutely prohibit the cubicle type of lodging and insist that every room shall have a window opening directly to the outer air.

In the ordinary industrial community this is not difficult, for land values are not high. In our great centers of population the problem is not so simple.

There are still many questions to be solved even as to the type of dwelling. For instance, how large a room is adequate for a single worker living under these conditions? The writer's own judgment is that 70 square feet is the minimum that should be provided and that 7 feet is the minimum width for such a room; and that where it is possible, a room of 90 square feet much more nearly approximates what is desirable. In considering this question of the size of rooms we must not lose sight of the fact that the amount of space available for the use of the occupant as shown on our plans is a very different thing from the actual space that is available when the room has been filled with furniture. This is too often lost sight of.

Some of the other questions that present themselves in connection with this problem of the housing of the single worker are, how shall he be taken care of? Man at best is a non-housekeeping animal. Without a woman he makes a sorry mess of it. It is pretty generally accepted, therefore, that to make the single worker comfortable he must be cared for by a woman.

The Housekeeping Problem

This means that, as a rule, there should be one woman to supervise each unit to see that it is kept clean, to look after the cooking and in general to "mother" the men. Whether it is best to have this woman the wife of one of the workers, as is now the custom where the boarding-house boss type of bunk house exists or whether she should be employed directly by the company operating the buildings is a broad question of policy.

One thing is clear. Any enterprise of this kind must be carefully supervised if it is to succeed. As a rule it will be found distinctly advantageous to put the supervision of the entire property—I do not refer to the single unit housing thirty workers or so, but to the whole congeries of units—under the supervision of a trained rent collector or social worker who can supervise not merely the collection of rents, but the whole management of the property. This is even more necessary in the case of the housing of the single man than it is in the development of a community of dwellings for workingmen with families.

How much per week the single worker can afford to pay, or is willing to pay—which is quite a different thing—for his

room and how much for his food we have little knowledge of.

Similarly, to what extent we should provide laundry facilities for the men to wash their clothes in the buildings in which they live is an open question, and whether it is better to provide them with their meals or to let them get their meals where they choose remains to be answered.

One thing that greatly complicates the whole subject is the mixture of nationalities that we have among the workers in our industrial communities. It is well known that certain races do not mix, even when there is no European war on. In developing lodging houses for the housing of the single worker this question of race should be given most careful consideration and so far as practicable an attempt should be made to house in the same building men of the same race or of allied race. The small unit lends itself advantageously to this treatment and this is an important factor in determining how small the unit should be.

The whole question, however, needs to be studied from the ground up. The field is virgin territory. It offers most valuable and interesting opportunities in the field of research and it is a social problem well worthy of consideration by all of us.

Renting *versus* Owning

A subject about which there is much difference of opinion is the question of whether it is better to build houses to sell to the workingman so that he may own his home, or whether it is better to merely rent the houses, thus keeping control of conditions.

In the case of the average American skilled mechanic earning $25 a week and more there can be little question. That type of worker is entirely capable of owning his home and should of course be encouraged in every way to become a home owner. In fact, as a rule he needs little encouragement, but is keenly desirous of this.

With the great mass of unskilled workers, however, the $15 a week man, it is not at all so clear that it is desirable that he should own his home. I know that many people will differ with me, but I am clearly of the opinion that it is not either for the best interest of that type of worker or of the community in which he lives that he should own his home.

Home owning involves not only social and moral responsibilities and qualities, but very definite financial ones. The man of low earning capacity has not sufficient financial reserves, nor can he accumulate them, to make it desirable or advantageous for him to become a property owner. He cannot, earning as he does a low wage, accumulate a sufficient reserve to enable him to acquire property without unduly sacrificing either his family or himself. We have all seen communities where workers of this type have been encouraged to own their home and do so by owning the mortgage. I have in mind a Southern city consisting largely of single-family dwellings where the workingman "owns his home" upon the payment of $25 down and then spends the rest of his life in trying to pay off the interest on the mortgage and secure a free and clear title.

This, as a rule, results in an improper standard of living for him and his family. He frequently makes his wife and children go without necessary food in order to put aside money to pay off the mortgage on the home; the recreational facilities of the family are slighted, they are improperly and inadequately clothed and frequently improperly and inadequately housed, for a house owner of this type, as a rule, is unable to make the expenditures that are necessary to keep his house in proper condition.

After making a study of this question through many years I am convinced that we are doing the workingman of this type an injury, not a service, in advocating the owning of his home and that we should frankly and clearly recognize that for the $15 a week man home-owning is not a possibility.

From the point of view of the community it is undesirable to have home owners of this kind, for property thus held rapidly deteriorates and causes the neighborhood to assume a slumlike aspect; it means also that the health author-

ities of that community find it increasingly difficult to secure from property owners of this type a compliance with the proper standards of sanitation that are essential to the wellbeing of the community. The most difficult problem that the health officers of this country have to face is just this sort of problem, namely, the attempt to get necessary improvements made in houses where the householder is so poor that he is unable to carry out the most essential and fundamental requirements of sanitation and health.

(To be continued.)

CHEMICAL LABORATORY

SCHENLEY HIGH SCHOOL, PITTSBURGH, PA.

MR. EDWARD STOTZ, *ARCHITECT*

(For additional illustrations see plate form)

Remodeling Iowa's State Capitol Building

That there is an increasing interest in good architecture and a public sentiment in favor of its conservation is shown by newspaper comment on the proposed remodeling of the Iowa State Capitol building.

The present building was begun in 1840, six years before Iowa became a state, and stands to-day a splendid example of the classical architecture of that period and the honesty of building methods. It is to be hoped that nothing will be done to mar a structure that is not only an historical one, but also presents such a good example of correct architectural design.

BOOK NOTE

THE INDUSTRIAL AND ARTISTIC TECHNOLOGY OF PAINT AND VARNISH, by Alvah Horton Sabin, M.A. Second edition, revised. Full cloth, 470 pp., size 5½ x 9 inches. Price $3.50. London: Chapman & Hall, Ltd. New York: John Wiley & Sons, Inc.

The aim of the author has been to supply a correct general outline on the subject of paints and varnishes. Differing from many technical works, this book has none of the often found "dry as dust" qualities. The author has approached his subject with a wide knowledge not only of the technical features of the manufacture of paints and varnishes, but also of the historical aspect of these industries, and by judicious handling of the material has produced a very readable book. It is one that can with advantage be included in the architect's library.

The Australian Competition

We are in receipt of a communication making official announcement of the indefinite postponement of the Australian Federal Parliament House Achitectural Competition, and stating that the minister has arranged for the registration of competitors to be retained, and that it is intended to complete the adopted program as soon as the time is opportune.

Personal

It is announced that the firm of Demers, Mosley & Campaigne, architects of Troy, N. Y., was dissolved on December 21st, 1916. The practice of the former firm will be continued at No. 12 Union Bank Building, Fourth Street, Troy, by Messrs. Demers & Mosley.

DOMESTIC SCIENCE DEPARTMENT
SCHENLEY HIGH SCHOOL, PITTSBURGH, PA.
MR EDWARD STOTZ, *ARCHITECT*

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III—12 CAPITAL OF THE SMALLER PULPIT, CATHEDRAL, SALERNO, ITALY

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THE CITY AND THE RAILROAD

NEW YORK CITY'S WEST SIDE IMPROVEMENTS

By RICHARD FRANZ BACH

WEST SIDE steal, the gigantic grab, and other ugly but expressively terse descriptive terms have been applied to the proposed Riverside compact between New York City and the New York Central Railroad. Much ink has been spilled pro and con in the newspapers and magazines, numerous civic, commercial and other organizations, not to mention a host of interested individuals, have entered the lists and if words were figured at the rate of dollars they would far exceed the expenditure projected to bring into being the enormous engineering and architectural scheme of improvement for Riverside Park. In the many tilts of word and pen the chief issues have largely been clouded, and now, on the eve of its settlement (which is set for February 14th), the main lines of the project are not clearly before the public mind. What are the facts of the bargain? What are the prospective municipal benefits and what is the relation of the whole affair to the City's need and future growth?

In the first place, it should be borne in mind that neither City nor railroad—above all, the latter—is content to give without receiving in return; that the plan must be construed as a bargain, or in good modern English, a deal. There must be give and take in a bargain, which ancient word presupposes an exchange of objects of comparable values. Many of the opponents of the plan, which is now in practically final form, are of the tribe of those who promptly see red when a railroad or similar corporation begins to ask for franchises or rights of improvement. The number of these municipal jingoes is legion; they regard as *ipso facto* bad or dishonest or grafting or somehow else illegal any scheme whatever in which such a public service corporation is concerned, and when the sovereign rights of the great public—withal the very lethargic and both morally and civically unmoved mass—comes into question as against those of a railroad, their rage knows no bounds, for it is assumed that under such conditions the public invariably must be soundly swinged. Unfortunately this is too often the case and in the majority of cases it is the fault of the City fathers suffering from what may be called "municipal myopia", a disease known to have affected otherwise unspoiled aldermen and similar officials as soon as bargains with rich and influential companies have come under discussion. We may safely say that in the present case our city government has approached its problem in broad-minded fashion and has sought to secure for the metropolitan city the greatest possible benefits at least cost, and that it has succeeded in obtaining from the railroad better terms than those among us who have watched the developments of this particular problem in the past have grown accustomed to expect. Anent these benefits, now thought within sight of realization—and their effect upon the city's growth, more in a moment. Suffice it to say that the City and the railroad were content to sacrifice each its part in turn in order to obtain valu-

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able privileges or lands or civic improvements to be valued far in excess of the sacrifice. But it must be remembered that an ideal bargain also presupposes mutual satisfaction, a conviction on both sides that the best possible results have been obtained at least possible cost. In what degree this bargain will bring future contentment as well as present satisfaction cannot now be definitely predicted, but we can agree that, with but few objections, or possible emendations, the suggested agreement offers the City direct benefits of several kinds which are distinctly necessary for its future improvement. Quantitatively, however, these benefits seem hopelessly beneath reasonable expectations in terms of value received by the railroad.

OBJECTIONS to the plan have centered chiefly around two points: the alienation of water front rights and the effect upon Riverside Park itself.

As a matter of fact the project will probably present to the railroad water front lands and lands under water valued as high as $250,000,000. As a matter of fact, again, the land to be turned over to the city by the railroad in exchange will make the city the gainer by nearly 200 feet of water front. There remains then, of course, the question of the relative position of these gains and losses on the water front and their possible increased future values. Here may be mentioned that there is on record an act of the Legislature, dated 1870, by virtue of which the city's water front is held to be forever inalienable. There is nothing to show that this act has been repealed or otherwise rendered invalid, and consequently the accusation has been made that the railroad is being specially favored. The fact remains that unless the State abdicates its power under this act, some reason ought to be forthcoming as to why its effectiveness should be nullified in the present case. It does seem that the present bargain constitutes and makes valid a literal gift to a great corporation of invaluable municipal riparian rights that at least *should* be inalienable and that the lands thus to be transferred confer upon this corporation a monopoly of a dangerous kind, such as no corporation should be permitted to enjoy, regardless of the benefits it offers as a public utility. Furthermore, we cannot avoid the conviction that other railroads will be definitively prevented from building New York City terminals under the conditions of the proposed agreement. Even if, as it is reported, such roads do not desire at present to enter Manhattan, the City should bear in mind that it must depend upon numerous arteries for its supplies, that citizens and workers in the city cannot be expected always to be satisfied with ferries and crosstown lines, and that, therefore, ways must be left open for the entry of these arteries at some future time. Any all rail tunnel or bridge scheme for such entry would be seriously handicapped by the proposed plan, which makes no provision for the crossing of its tracks or the passing above or below them by trains of such other roads. It would even seem reasonable to make the reservation that, when pressing conditions warrant, the railroad using the water front tracks must hold itself open to permit the use of its tracks, with proper recompense, by the other roads above mentioned. In fact, it would seem false logic to admit any one railroad to such exclusive rights on any city waterfront regardless of conditions, especially since there are available untold acres of undeveloped land outside Manhattan Island. The City's water front rights will one day be of inestimable value; the railroad has calculated that value and has found it worth a careful bargain. For twenty years it has fought to increase its grip upon the City's streets near the river's edge. It wants this water front as a nucleus, it might be said, for a greater scheme of riparian control, and possibly one day with this beginning and when public interest has subsided or is otherwise engaged, it will find a way of obtaining an even greater river frontage. Even the present suggested scheme involves cutting off a dozen street ends and one avenue. The project, seen from this angle, looms larger and larger. The larger it looms the more careful should be this first decision and grant on the City's part. What is now begun may lead

to egregious evils or it may lead to enormous benefits. If the way is clear and nothing on the statute books to forbid, it may seem reasonable to make this bargain as now arranged, but it must be decided distinctly on its value *to the City.* Will the City be "letting itself in" for a scheme of growth for a private corporation which it must afterward foster in order to benefit by it? Is it altogether advisable to admit such a corporation and none other to its water front? It is not for us to decide quickly upon matters of such weight for the future. What is more, it is not, above all, a matter in regard to the water front of the railroad *or* the city, but rather of the city *and* the railroad.

Then, as an ounce of consolation, we are told that the city reserves the right to build a railway of its own along the water's edge. The reservation sounds hollow; we discern no use for such a railway, and, worse yet, the agreement makes no definite stipulation as to the right of such a city railway to cross, or pass over or under the railroad's right of way to get to the center of Manhattan Island. "Necessary turnouts," as stated in the plans, means very little or very much depending solely upon whether the railroad is giving or receiving the benefit therefrom.

In scanning the conditions as published we come upon slips such as this and a suspicious doubt arises in our minds, and, granted that our suspicions are unfounded, as we hope and believe they are, we must urge again the most circumspect mode of procedure, the utmost care that all possible points have been considered, for when the agreement has once been made, it will be too late to stipulate just what is meant by the railroad's water front rights; although we can appreciate, to be sure, the need for free access to the river at the Thirtieth, Sixtieth and 135th Street yards, although the last-named should be sufficient, in terms of area allowed.

AS to the effect upon Riverside Park, the general opinion has been that this city "lung" will suffer seriously from the increased trackage of the railroad. The latter proposes to lay six tracks through the park—there are now only four—and to locate the two additional tracks under the park proper, using a cut and fill method of roofing over the original tracks. By this means the area of the park is to be increased by about twenty acres, ostensibly of good soil for planting. According to its opponents, this means the covering of the tracks with an insufficient depth of earth, so that lack of moisture and constant vibration may retard or destroy growth in the area over the fill. Adherents claim that the park will be improved because it will be carried to the river's edge and thus give the public direct access to the water, and especially because sundry garbage disposal piers and other offensive structures would be removed. It would seem that further discussion by experts ought to be able to dispose of the question as to whether or not this part of the project offers only a deceptive benefit. The railroad has set aside the sum of $300,000 to landscape the park over the tracks, but present indications are that this amount will not be sufficient. Since the layer of earth made possible by this amount will surely be too thin, the city will be required, no doubt, to spend $200,000 more to lay additional earth of adequate depth for planting. This seems a princely gift to a corporation that is demanding so valuable a franchise. Why should the City be put to any cash outlay? The City has all there is to give; but the City seems not to have an administration that can exact respect for the City's rights, and among these that of finely developed parks for its people should be one of the most sacred.

There is also the question of the appearance of the park, apart from planting, from the river side, especially at points near its upper end and near Grant's Tomb; likewise the effect of the new plan upon the City's improvements uptown, where the total cost of present parking streets and embellishments is too great to be disregarded and the improvements themselves too successful to be undone. Here again are points that seem to merit a most careful analysis and their solu-

tions the deepest scrutiny, for permanent disfigurement may result as readily as permanent enhancement.

IN this connection we must not lose sight of certain distinct and undiluted benefits accruing to the City from the suggested agreement, which, in all justice, should also be recorded here. Among these is the extension of the Riverside Park system from Dyckman Street northward; the clearing away of deadly surface tracks in Tenth and Eleventh Avenues; the abandonment of the present St. John's Park terminal of the railroad; the elimination of all trackage south of Canal Street; the building of an elevated track from Canal Street to Sixtieth Street over private right of way and in between blocks; and finally, the electrification of the whole system within city limits within a four-year period. The value of these items of the scheme is undisputed; only the elevated track from Canal to Sixtieth Streets raises a doubt. New York is surfeited with unsightly "L" tracks. The new subway lines now under construction are further examples of this type of city nuisance, unending sources of dirt and noise, ugly encumbrances of city streets that cut off light and reduce air currents to dusty eddies. Considering this with other aspects of the scheme and bearing in mind the various angles from which criticisms have come, why not an honest tunnel scheme throughout? Would that cost so much more as to make the plan impossible? An honest tunnel plan for the entire project, removing the railroad entirely from sight (with possible exception of its marine yards or any necessary surface stations, although all of these might well be underground), would eliminate all objections that have thus far been given utterance.

IN the whole proceeding vast sums have repeatedly been mentioned—sixty millions, even one hundred millions—sums calculated to make the humble public catch its breath in awe at the alleged great gift of a public-spirited corporation to the City. It is safe to say that these amounts are estimates broad enough to guarantee the execution of the project doubly and more, and that any projected outlay whatever has been counted on the basis of profits returnable within a short time, or at any rate within a decidedly reasonable time as an investment. While the City makes the investment throughout in an altruistic manner for the benefit of its citizens, it must be remembered that the railroad regards the whole project as a business proposition. What it gives it can afford to give, and the City need make no lickspittle apologies for having to receive its gifts. While a great railway may be public spirited as a corporation, its directors among the city's first citizens, its employees cared for, its system a model of perfect control and efficiency, despite all these virtues it will obviously not essay to make public benefaction at the cost of inconvenience or cold dollars to itself. If such an ideal state of affairs were possible, the Death Avenue tracks would have been removed ere this, for there it was a simple equation between human lives and dollars. Therefore we should not be unduly stirred by quotations of the enormous prospective cost of these improvements to the railroad company; it would make no offer to spend without definite assurance of making good its outlay. If the money outlay comes into question at all, it should be the actual outlay of the City alone that should engage us.

Some other questions occur as the whole suggested agreement is reviewed. What of the proposed cutting off of a large number of public streets beyond the lower end of the Park? What of the possibility of ever building the bridge, so long under discussion, at Fifty-ninth Street or anywhere else along the new line of track? What of the indefinitely postponed Hudson-Fulton Memorial at 114th Street?

It occurs to us also to suggest a possible crosstown tunnel somewhere near Forty-second Street, connecting the river side tracks with the Grand Central Terminal, as an artery through which some passenger traffic might be diverted westward to join the main track at Spuyten Duyvil, after making a passenger stop at Fort Lee Ferry. Then there is the question of covering tracks in park districts other than that of Riverside Park itself; here

again it is believed the best scheme is that of an actual tunnel.

What of the roofing over of the railroad's river side yards at Manhattanville, and the granting of easement rights over the roof area to the City? What of the effect on property values near the new right of way downtown? What of the tracks at grade level that it is proposed to retain? What of the meaning of indefinite terms such as "suitable turnouts" so often encountered in the present plan and so easily misconstrued? When all of these queries are thus ranged together, one cannot help asking where the distinction lies between a bargain and a "grab." Nor, again, can one help noticing the strong infusion of politics, a backwash that invariably accompanies any important civic undertaking, and which is here but poorly concealed. It is not so long ago that the Mayor actually vetoed a bill that would have compelled the railroad to electrify its tracks.

And finally, what of the City's control over the esthetic result of the whole project? There has been no mention of a general architectural and city planning achievement. Experts have been consulted only with reference to individual aspects of the plan, the park, the yards, etc. We need to establish such general control at the outset, for the plan should have a direct bearing on the City's plan, the City's service and the City's appearance. We need a group of city planning experts and landscape architects, as well as engineers, to solve this problem. It is bound to be a great engineering feat, but its architectural and landscape and city planning aspects are not to be ignored. Thus far there has been considered only the City's side or the railroad's side of the scheme, not the harmonious and unified success to be obtained by collaboration. The bargain has thus far been no more than a proposed exchange of commodities; it would prosper all the better if the exchange were tempered by a spirit of cooperative effort.

In conclusion, it may be said that the City must plan for the future as does the railroad, and there is truth in the statements of both parties to the discussion. The possibilities of the project are undoubtedly magnificent; it is a splendid project for a splendid purpose; it merits an unstinting outlay of time and thought and money, and, if properly handled, it will prove a lasting benefit to the Greater City. As the greatest ocean port New York is in desperate need of better freight facilities, and any city must benefit by the great railway lines within its limits that bring it business and food and carry forth into the world the multifarious products of its manufacture. But the City's benefits from the presence of the railroad must at least be balanced by the railroad's profits from the presents of the City.

Architectural Aberrations

In an article on the aisle vaulting of Winchester Transept, contributed to the *Journal of the Royal Institute of British Architects* by Professor Charles H. Moore, late director of the Fogg Art Museum at Harvard University, attention is directed to the free hand execution that marks every part of the work:—

"Hardly a line, on plan or in elevation, would be found to coincide with a straightedge. The arches and archivolts are on plan more or less curved or sinuous, and are often narrower at the crown than at the springing, while in elevation they are variously irregular, some being semicircular, some less than half circles, some stilted, and some of horseshoe form. These variations arise in part from differences of span in relation to height, but why one arch should be stilted and another horseshoe-shaped it is hard to determine.

"As for the structural system of this transept as a whole, it is curiously illogical. The tall shafts that reach to the wall cornice could not carry vaulting, since vaulting cannot spring from the top of a wall. The short shafts, too, over the ends of the return aisles have no intelligible purpose that has yet been discovered. Willis suggests the possibility of an intention to erect an arcade over the return aisle, and to utilize the gallery thus enclosed for chapels or for the preservation of relics. The ends of such an arcade,

he appears to think, might have been supported on these shafts; and he questions whether certain signs of disturbance which he finds in the masonry over the shafts may not be traces of something once actually built there. But arches springing from these shafts would not range in height with those of the triforium, and such an arcade could not, therefore, I think, have been contemplated. Mediæval architecture, however, on the Continent as well as in England, often presents many equally puzzling features. The clerestory in its relation to the substructure is no less incongruous. It has the usual Norman passageway, but the composition is not the same throughout. Willis supposes that the clerestory and the substructure were built at different times, but this does not explain their lack of structural consistency. The ground story and triforium arcades are strictly logical in composition, and it is strange that the same logic should not extend through the whole system.

"But, notwithstanding its structural aberrations, the total effect of this transept is one of impressive grandeur. It has a massive dignity and restraint that are, I think, seldom equaled."

THE OPEN STAIR TENEMENT

By WILLIAM EMERSON, F.A.I.A.

IT WAS in 1876 that Mr. Alfred T. White built in Brooklyn the first of those buildings that have since become known in this country as model tenements. This, curiously enough, was an open stair tenement (see Fig. 1).

Although its plan meets many requirements of the present tenement house law in New York City and was a model and inspiration to those interested in this class of work at the time it was built, yet it was not until 1900 that this open stair feature again appeared in a plan (see Fig. 2), and this plan received a prize for distinguished merit above all competitors from the Charity Organization Society, in a competition held to procure the best results from the new law; a curiously tardy recognition on the part of the interested public of a feature which contained the essence of almost every element necessary to both the moral and physical well-being of the tenement dweller.

It may be well here to call attention to some of the ways in which the open stair recess, even as at present permitted under the New York Tenement House Code, recent examples of which can be seen in Figs. 3 and 4, meets the needs of the tenant: how it brings fresh air to the very

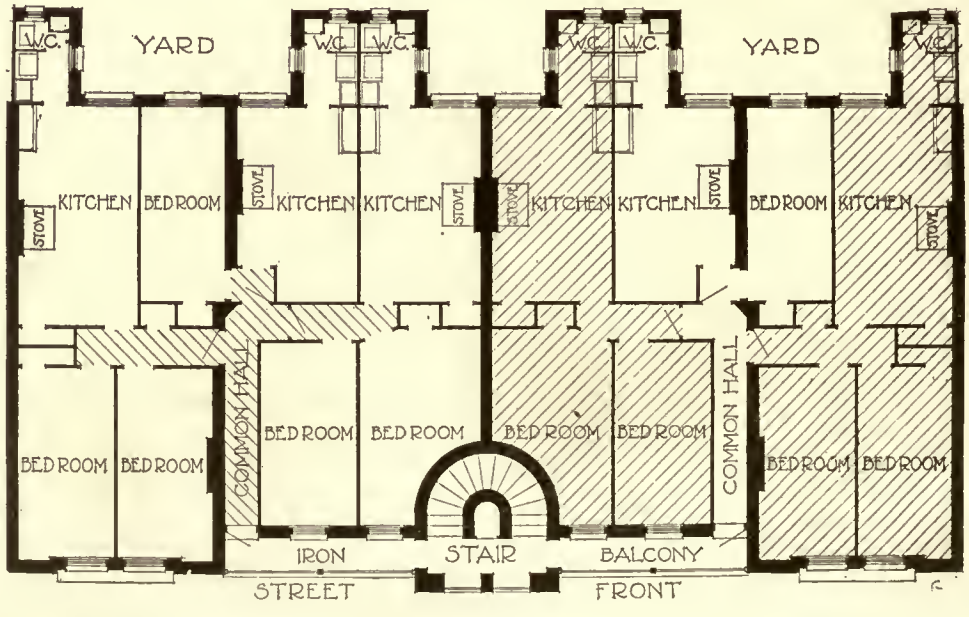


FIGURE I

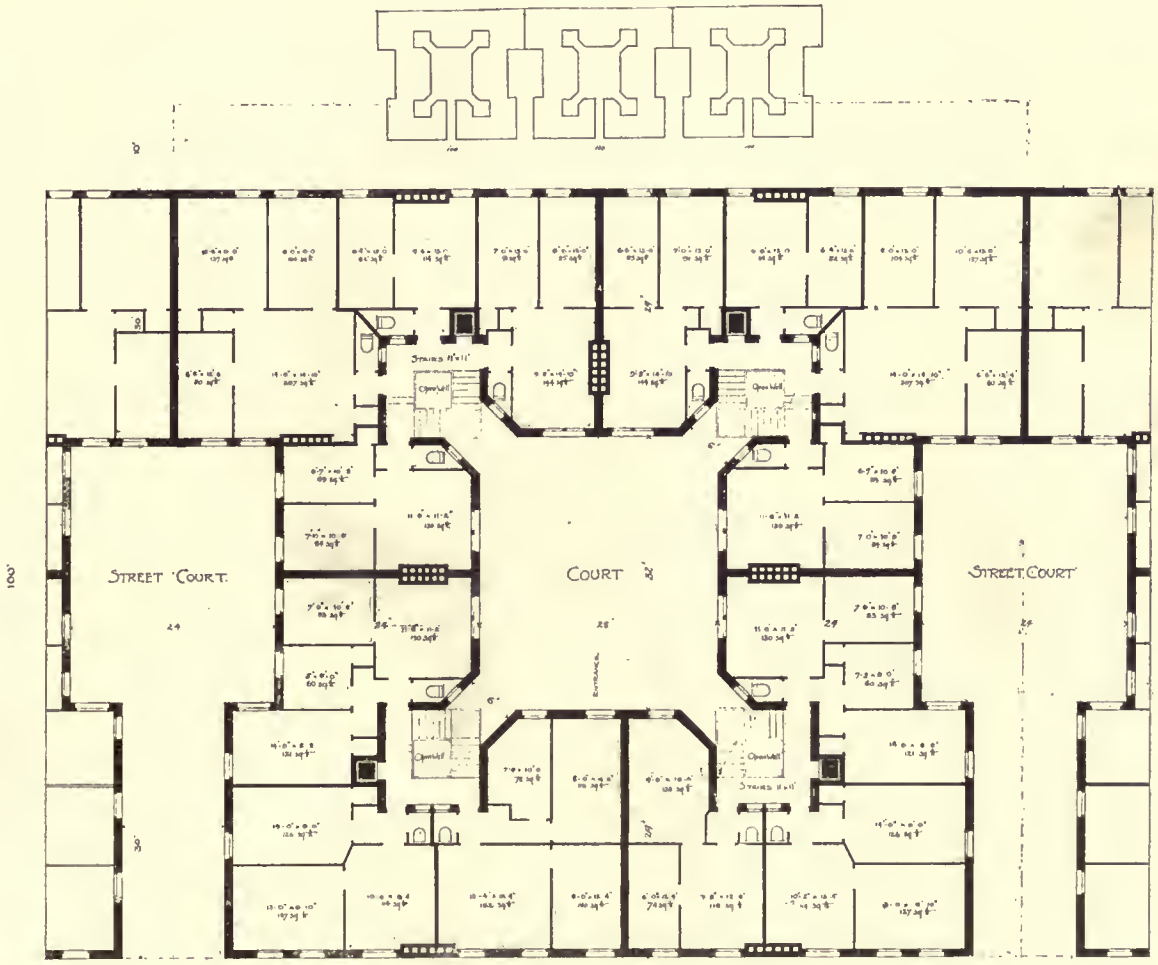
MODEL TENEMENTS IN BROOKLYN FOR MR. ALFRED T. WHITE

door of every apartment, and at the same time eliminates dark halls.

That a feature of such considerable value should have been so little used by those interested in improving modern housing conditions, is largely due to the fact that one of its most useful properties has been eliminated by what appears to be such a lack of elasticity on the part of those empowered with the interpretation and adaptation of our Tenement House Law in New York City, as to lead the public to believe that these authorities are more interested in preventing changes to the existing law, than in encouraging its amendment so that it may better meet those very needs which it was enacted to serve. I refer to the prohibition on locating baths and toilets on open stair recess without other means of ventilation.

The Tenement House Code of New York City has been such an incalculable benefit to the place of its birth and such an invaluable example to every other city with a similar problem, that it is doubly to be deplored that its usefulness should have been so curtailed by what may, perhaps, be attributed to its mandatory nature, as to prohibit this grouping of toilets and baths around the outside stair recess, and their ventilation upon this recess. If this were possible we should find that in addition to the advantages indicated previously we should be able to give bedrooms and living rooms all the best light and air available, and at the same time dispose of our floor space much more economically.

Other cities have not been deprived of the benefits to be derived from this par-



Single 5 ft Entrance to each 100 ft Block.
Stairspaces open To Court covered with glass at roo
10 Plumbing lines To 14 Apartments

70% of lot is covered including stairs
53% . . . Rentable Area
46⅔% . . . Available space in Rooms, ex Closets, Halls, etc.

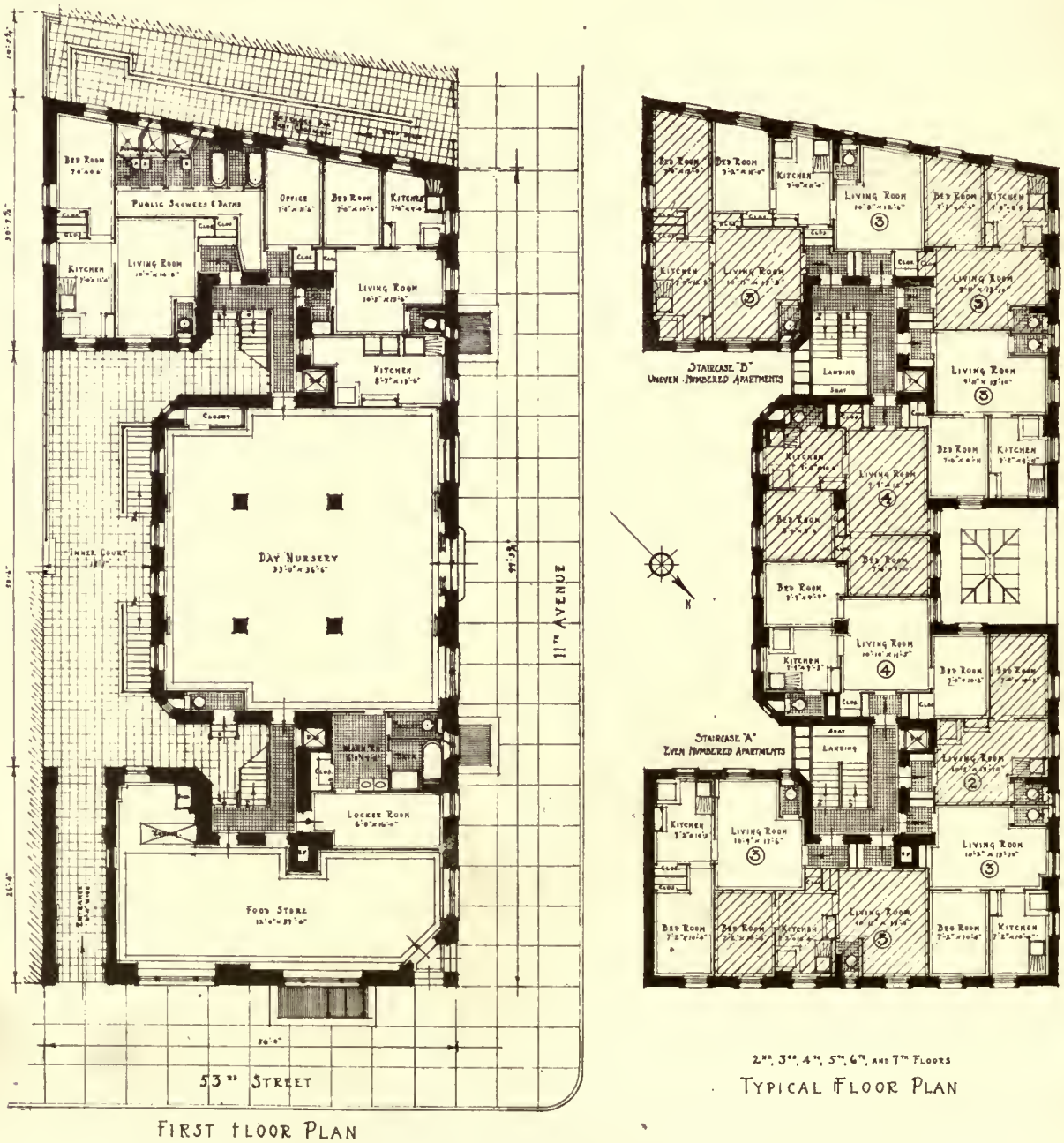
FIGURE II—PRIZE PLAN
BY MR. HENRY ATTERBURY SMITH, *Architect*

5 Four Room Apartments 20 Rooms
7 Three " " 21 "
2 Two " " 4 "
14 45
10 are Front Apartments

ticularly valuable characteristic of the open stair feature as shown on Fig. 5—a building now actually executed in Cincinnati, Ohio. It indicates no marked departure from the arrangement of the other open stair plans published, except in respect to the location of toilets and baths. All of these plans bring the outdoor air to the entrance door of the apartment, and at the same time eliminate dark halls, but with this location of the baths and toilets alone are the street and court walls of the building left so free that the bedrooms and living rooms may enjoy to the fullest extent the best of the light and air.

Such an arrangement for baths and toilets enormously facilitates a further convenience and likewise an economy in plan, that contributes to the privacy of family life and that makes possible such use of the remaining space as to increase the available area sufficiently to permit

(*Continued on page* 105.)



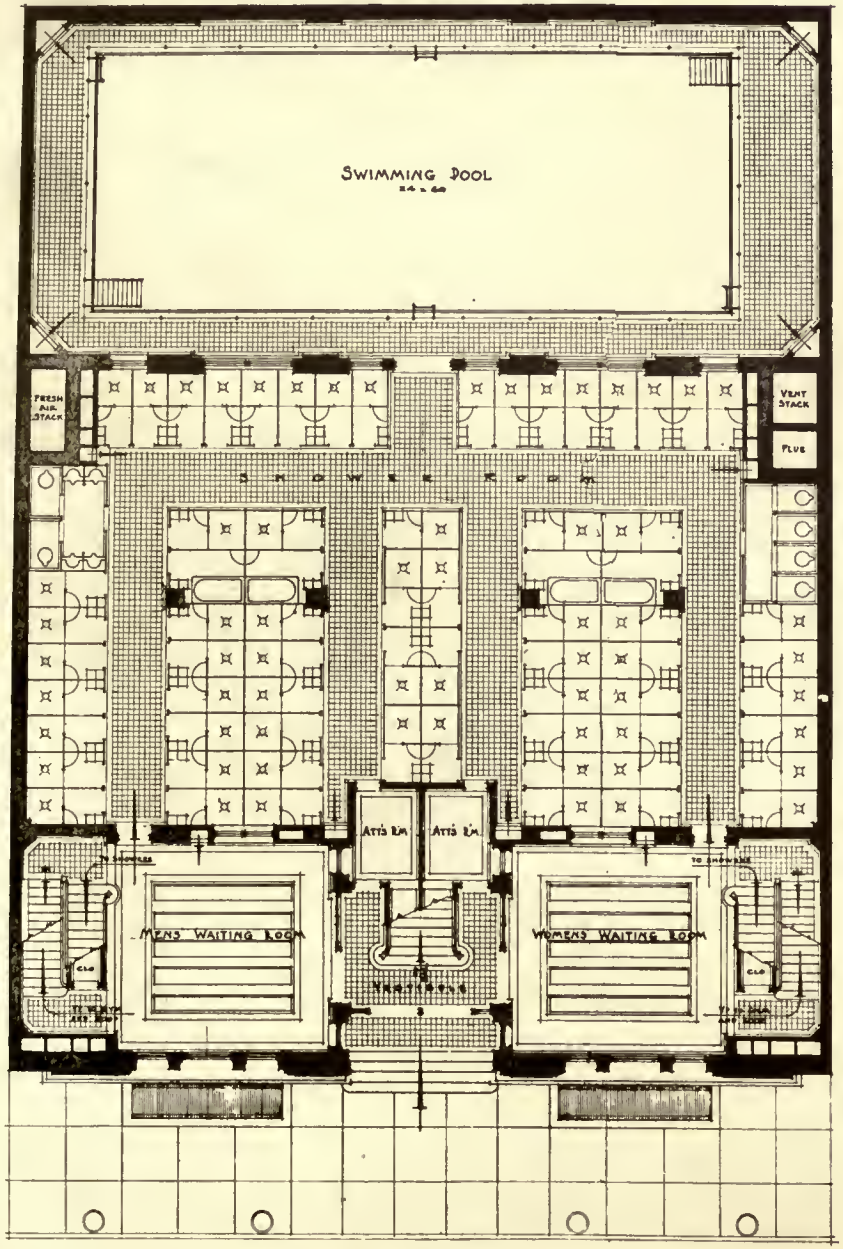
FIRST FLOOR PLAN

2nd, 3rd, 4th, 5th, 6th, and 7th Floors
TYPICAL FLOOR PLAN

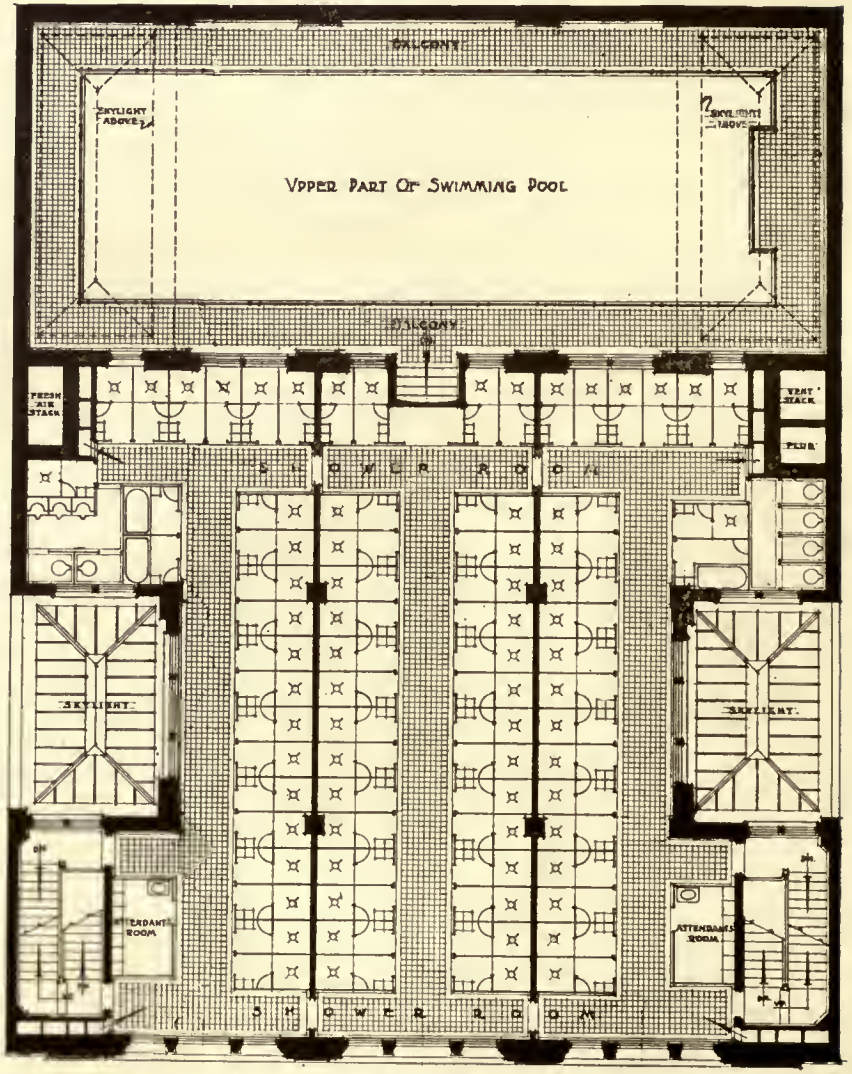
FIGURE III—MODEL FIREPROOF TENEMENT AT 746 ELEVENTH AVENUE
MR. WM. EMERSON, *ARCHITECT*

PUBLIC BATH AND GYMNASIUM, W. 28TH STREET, NEW YORK

MR. WILLIAM EMERSON, *ARCHITECT*



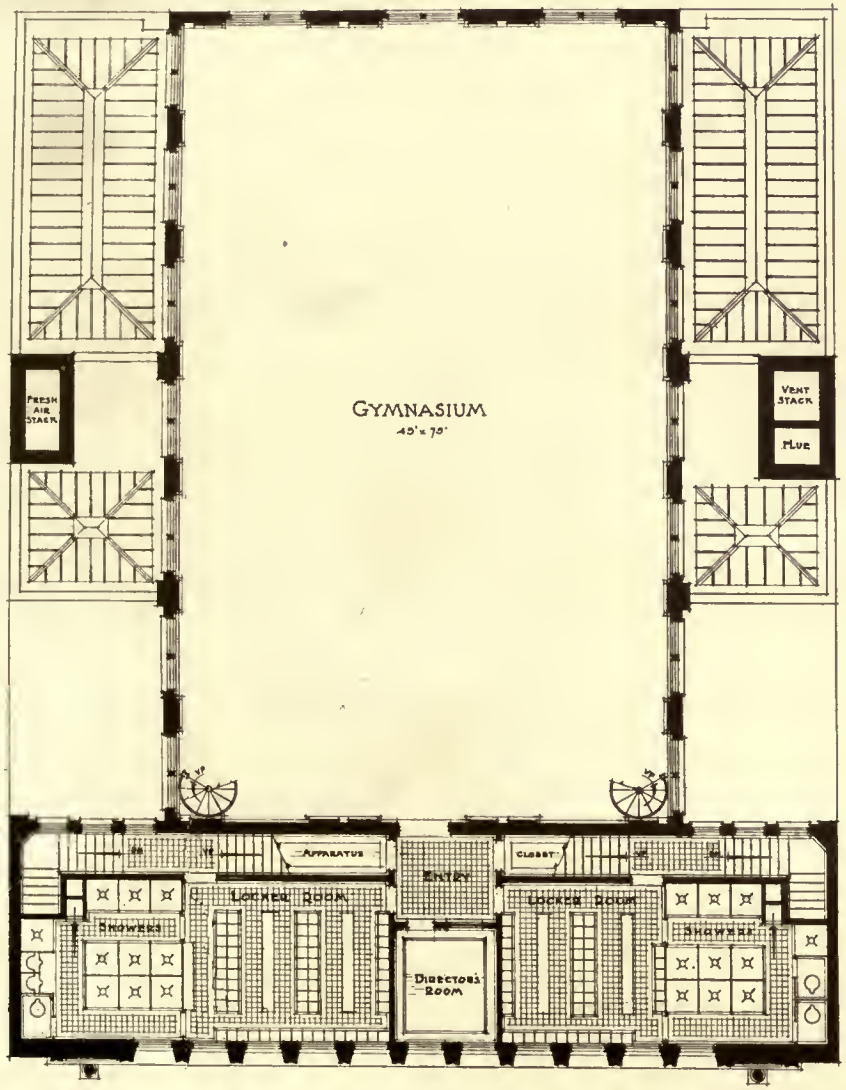
FIRST FLOOR PLAN



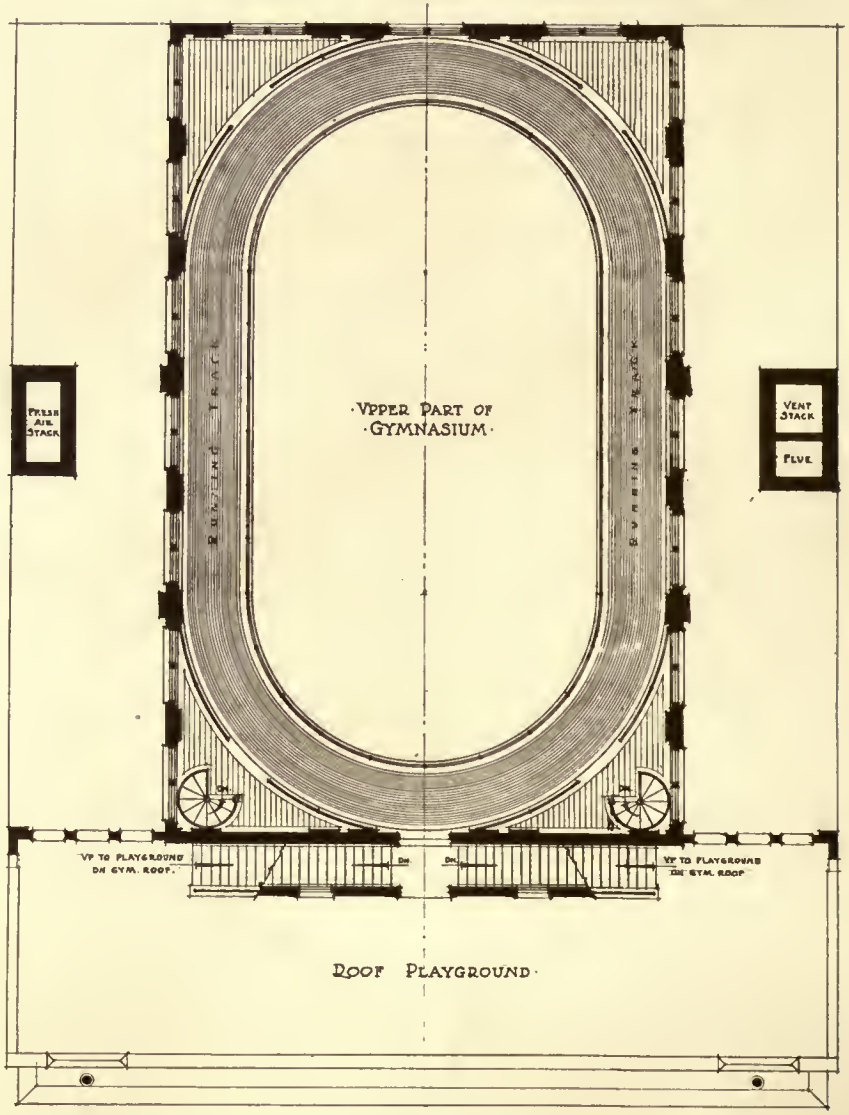
SECOND FLOOR PLAN

PUBLIC BATH AND GYMNASIUM
W. 28TH STREET, NEW YORK

MR. WILLIAM EMERSON, *ARCHITECT*



THIRD FLOOR PLAN



RUNNING TRACK PLAN

PUBLIC BATH AND GYMNASIUM, W. 28TH STREET, NEW YORK

MR. WILLIAM EMERSON, *ARCHITECT*

PUBLIC BATH AND GYMNASIUM, W. 28TH STREET, NEW YORK

MR. WILLIAM EMERSON, *ARCHITECT*

PUBLIC BATH AND GYMNASIUM, W. 28TH STREET, NEW YORK

MR. WILLIAM EMERSON, *ARCHITECT*

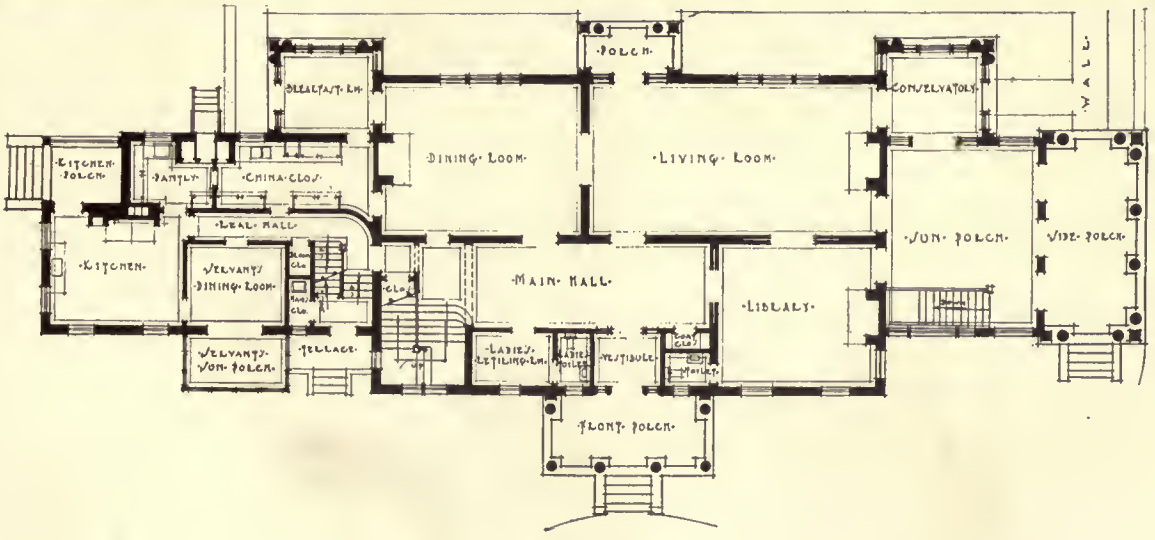
PUBLIC BATH AND GYMNASIUM, W. 28TH STREET, NEW YORK

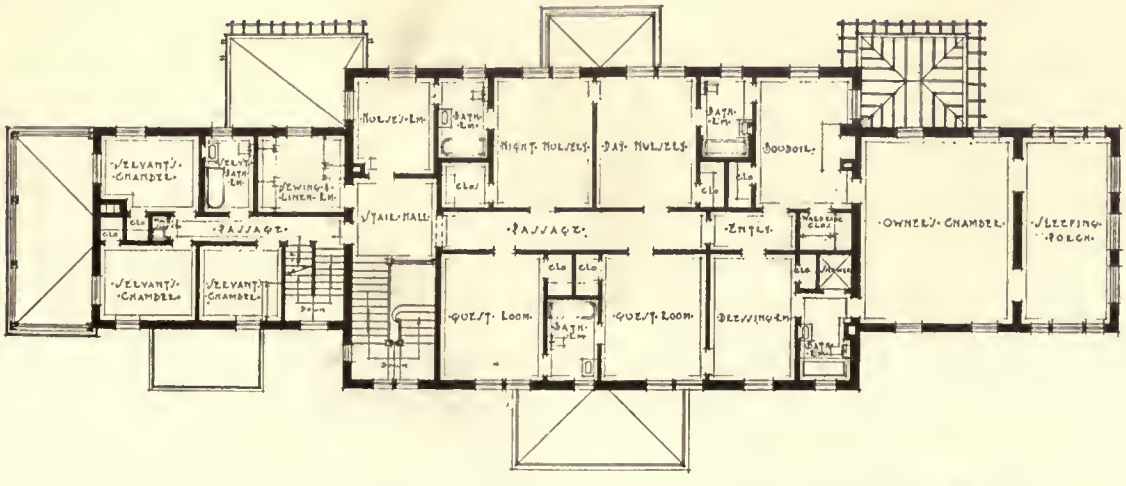
MR. WILLIAM EMERSON, *ARCHITECT*

SOUTH ELEVATION

HOUSE OF J. BROOKS NICHOLS, ESQ., GROSSE POINTE, MICH.

MESSRS. CHITTENDEN & KOTTING, *ARCHITECTS*





HOUSE OF J. BROOKS NICHOLS, ESQ., GROSSE POINTE, MICH.

MESSRS. CHITTENDEN & KOTTING, *ARCHITECTS*

HOUSE OF DAVID GRAY, ESQ., GROSSE POINTE, MICH.

MESSRS. CHITTENDEN & KOTTING, *ARCHITECTS*

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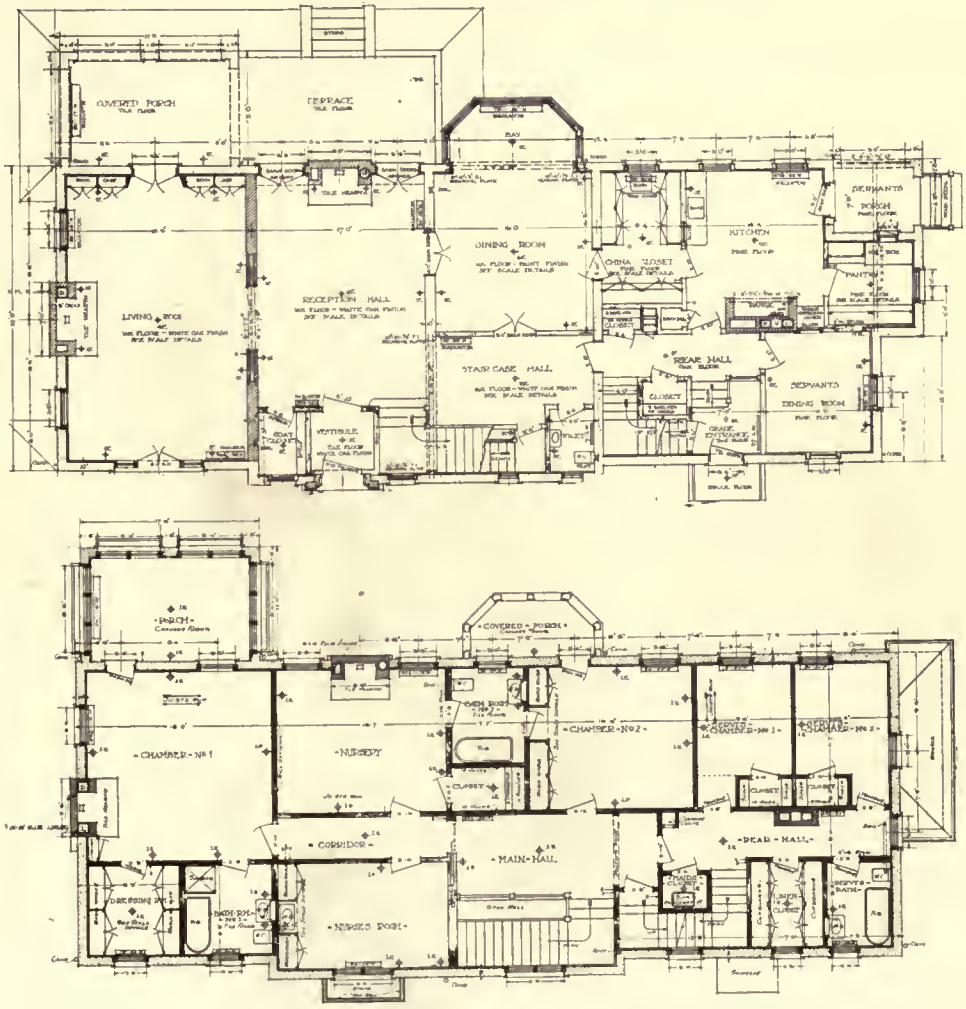
THE AMERICAN ARCHITECT

VOL. CXI, NO. 2147 FEBRUARY 14, 1917

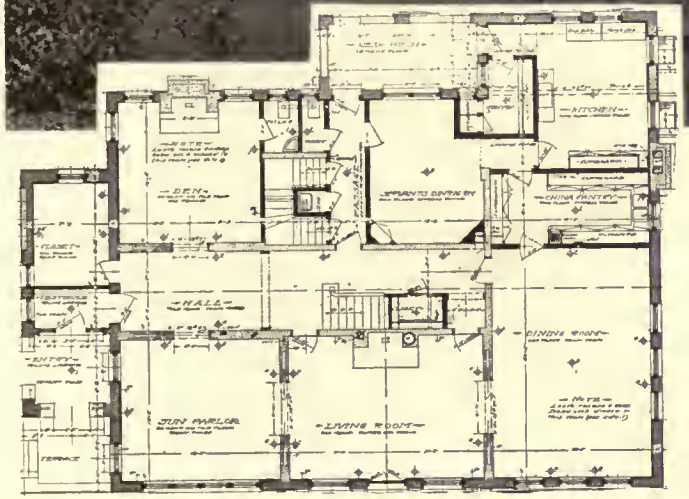
WEST ELEVATION



HOUSE OF DAVID GRAY, ESQ., GROSSE POINTE, MICH.

MESSRS. CHITTENDEN & KOTTING, *ARCHITECTS*

SOUTH ELEVATION



MESSRS. CHITTENDEN & KOTTING,
ARCHITECTS

HOUSE OF H. MUIR, ESQ., GROSSE POINTE, MICH.

HOUSE OF S. T. DOUGLAS, ESQ., GROSSE POINTE, MICH.

MESSRS. CHITTENDEN & KOTTING, *ARCHITECTS*

(Floor plans not available)

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VOL. CXI FEBRUARY 14, 1917 No. 2147

THE AMERICAN ACADEMY IN ROME

IF the details proposed in a plan now under consideration by the directors of The American Academy in Rome can be carried out successfully, they will serve to make this valuable institution the property of the American people, without encumbrance.

The early struggles of the Academy to accomplish the very high purposes in the field of Art for which it was intended, attracted the attention of the late J. Pierpont Morgan. Mr. Morgan, with the generosity that characterized his patronage of the arts, advanced at different times sums of money that enabled the Academy to continue its work, and in fact insured the very life of the project. No interest has ever been paid on these sums, nor has any even been requested. Mr. J. P. Morgan, son of the early benefactor, has now notified the Executive Committee that for each dollar contributed to the permanent fund he will cancel one dollar of the indebtedness. If this very important undertaking now receives the additional financial encouragement to which it has earned a right, and if those who are in a position to give material assistance to an undertaking eminently worthy of support, respond, The American Academy in Rome will be speedily placed on a firm financial footing.

The ultimate plan that the Executive Committee has in mind, and which President Mead has outlined in a recently published interview, is the establishment of a post-graduate school where painters, sculptors, architects, landscape architects, and classical students, who have already done work of promise, could realize the ideals which they have conceived.

It would be most unfortunate if this institution should be hampered in the working out of these commendable plans, and it is hoped that the men in this country to whom it is felt we can reasonably look to furnish substantial encouragement to so worthy a cause will take the necessary steps to insure the permanent efficiency of the institution. It is gratifying to learn that among those who are already displaying an active interest in this movement are many men of large means belonging to the class referred to whose generous attitude toward meritorious projects for the advancement of art in the past has been of benefit to the country at large.

THE CEMENT SHOW

THE tenth Chicago Cement Show, held this year in the Coliseum, is just drawing to a close. These annual exhibitions which were planned primarily to disseminate information relating to the durability, fireproofness and economy of concrete construction have undoubtedly exerted a wide influence in the development of the cement industry. According to statistics compiled by the United States Geographical Survey, shipment of Portland Cement in the United States amounted to more than ninety-four million barrels during the year 1916. It seems difficult to harmonize such a statement with the fact that cement manufacturing in the United States is still a comparatively youthful industry. Its remarkable growth can only be accounted for by the inherent properties of the material and the campaign of education regarding the use of cement—of which

the Cement Show is a part—that has been carried forward continuously during recent years by cement manufacturers, contractors, engineers and architects, who have given study to the material and its possibilities.

There is no question but that the idea of permanent forms of construction has taken deep root in this country. All forms of building in which the qualities making for permanence are to be found are in greater favor than ever before, and chief among these forms is the concrete building.

There are other materials which compete with concrete in tests of fireproofness, durability and economy, but concrete, particularly monolithic construction, appeals to the public imagination more strongly, it would seem, than any other, especially for buildings of a type generally classed under the head of "industrial." Cement has also had a wide application in the construction of roads, bridges and engineering works generally.

While the exhibition in Chicago is given the name of "The Cement Show," exhibits are not restricted entirely to cement products. Machinery of all kinds and descriptions used in the handling and working of cement is given space, and forms an interesting part of the exhibition. A wide variety of steam and gasoline engines are also displayed, and excavators, back fillers, scrapers, motor trucks and other appliances, and even building materials used in connection with concrete construction—although their use may be equally appropriate in buildings constructed of other materials—are all given prominence in this exhibition. Steel sash are an example of this class of exhibits.

That the annual Cement Show serves a useful purpose there is no longer any question. That it is growing in importance each year is also equally obvious, and while it would seem as though the present exhibition could scarcely be excelled, it is stated that plans are already on foot looking toward making the exhibition to be held next year greater in scope and more perfect in detail than any that has yet been held.

CONTROL OF BILLBOARDS

IT is reported that the Supreme Court of the United States has recently held as constitutional Chicago's billboard regulation of 1911, prohibiting billboards on residence streets without the consent of more than half of the property owners. With this decision on record, it would seem as though protection might now be afforded residential districts of all cities throughout the country.

Public sentiment has been thoroughly aroused against the defacement of our streets and thoroughfares by the unsightly billboard, but the impression has been more or less general that cities were powerless to prevent these eyesores where they were erected upon private property. Gradually, however, the theory that an individual may *not* "do as he likes with his own," when others are damaged by his action, is being established in this country, and the decision referred to seems to constitute another progressive step. The matter of billboards now seems to rest entirely with the lawmaking bodies of the various cities and upon them and the residents of each district will apparently fall the responsibility for further extensions of this nuisance.

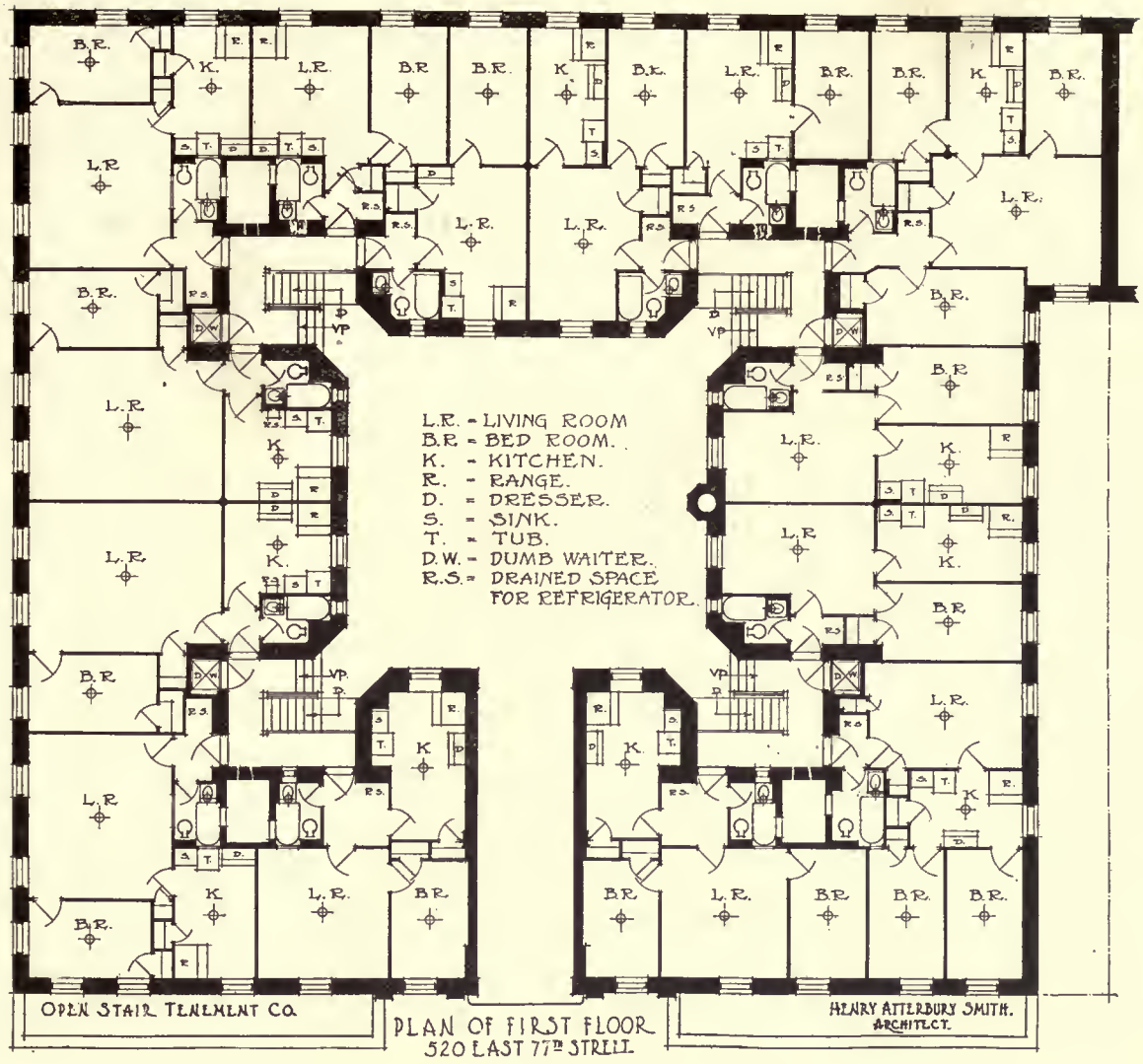


FIGURE IV

The Open Stair Tenement

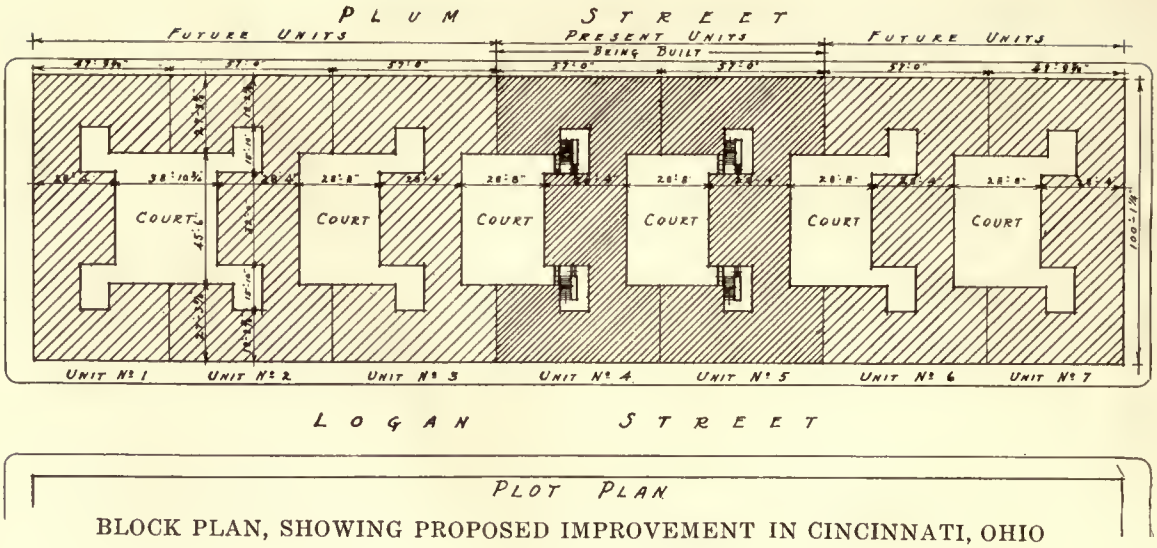
(*Continued from page* 102.)

fireproof instead of non-fireproof construction. I refer to the entries from which private access is had to the toilets and baths, instead of from bedroom or living room as would otherwise be necessary.

The significance of the advantages indicated above lies in two closely related facts: first, that the investor interested in the model tenement as a desirable form of civic improvement looks for a return on his investment; second, that such an investor is realizing with increasing clearness the need for making any building in which human beings are housed fireproof.

With the steady rise in the cost of almost everything that goes into the construction of a building the need of economy in planning so that every possible foot of space is made available, is increasingly imperative. It would thus appear that recognition of the value of the above arrangement would encourage an increase in the very best type of model tenement to the benefit of both tenant and owner. Such a recognition by the New York Tenement House Code would be in line with what is more and more generally felt to be the best service that a law can give—namely, development along lines which meet the fullest needs of the community, rather than a series of prohibitions as to that community's actions.

May these arguments prove sufficiently potent to accomplish this result.



BLOCK PLAN, SHOWING PROPOSED IMPROVEMENT IN CINCINNATI, OHIO

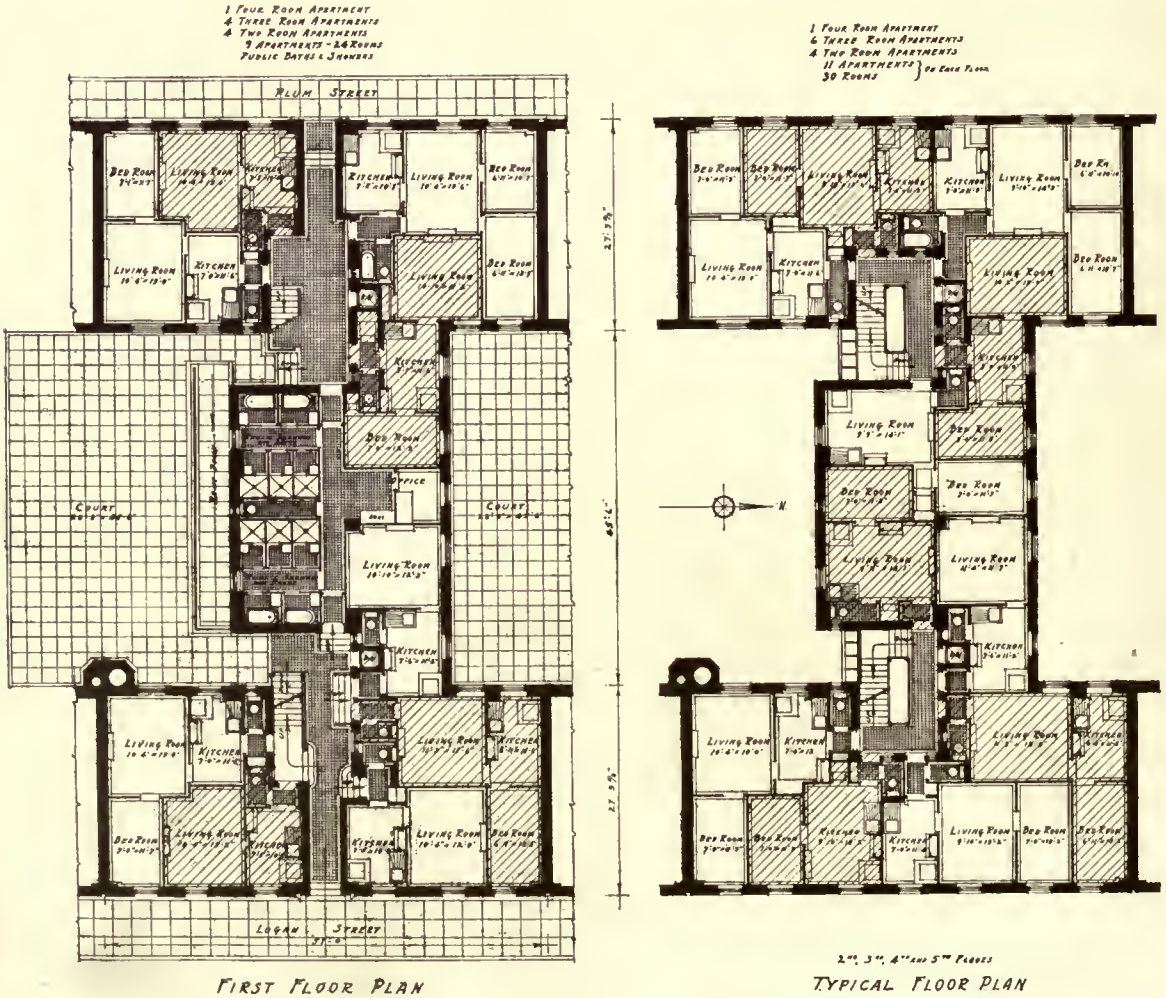


FIGURE V—MODEL FIREPROOF TENEMENT AT CINCINNATI, OHIO

MR. WM. EMERSON, *ARCHITECT*

THE CURRENT ARCHITECTURAL PRESS

PROFESSOR HAMLIN, in the opening sentences of his very valuable series on "Gothic Architecture and Its Critics," in the December issue of *The Architectural Record,* seeks to make clear the proper use of the word "Gothic" as applied to certain forms of architecture. He states:

"We speak of the French Gothic, the English Gothic, the Spanish Gothic, in recognition both of the diversities and of the unities of that marvelous architectural movement which covered Western Europe with churches and cathedrals between the middle of the twelfth century and the end of the fifteenth. These unities were not merely on the one hand that of the ritual and discipline of the uniform church which they served, nor on the other that of mere form and detail. It is no mere superficial resemblance of pointed arches and pinnacles and tracery that warrants our applying the common name 'Gothic' to all the varied phases of the medieval

(FROM THE ARCHITECTURAL REVIEW)

MERCHANTS NATIONAL BANK, NEW BEDFORD, MASS.
ADDEN & PARKER, *ARCHITECTS*

ecclesiastical and even domestic architecture of Western Europe. Doubtless these superficial resemblances and that ecclesiastical unity are what appear most obvious in this architecture; and it is perfectly true that the term 'Gothic' was wholly unscientific in its origin, as used to designate all medieval work because of its non-conformity to the 'correct' or classic manner of antiquity and of the Renaissance. But it is also true that the later narrowing of its popular application, to designate the pointed architecture of the Middle Ages, was justified by those underlying unities which are traceable in all the Gothic styles, though so often obscured by their differences. The fundamental structural problem which dominates all these styles is the ribbed intersecting vault and the means for supporting and abutting it; and the features which I enumerated in a former paper as characteristic of these styles were chiefly derived from or consequent upon the development of the various solutions of this structural problem."

(FROM THE JOURNAL OF THE A. I. A.)

THE OLD SQUARE, PROVINS
AFTER THE ETCHING BY HENRY WINSLOW

This exposition of the underlying principles of a form of architectural expression that has been very much discussed during recent years—frequently without a definite understanding of its origin or

(*FROM THE BRICKBUILDER*)

ELKS CLUB HOUSE, CAMBRIDGE, MASS.
CHARLES R. GRECO, *ARCHITECT*

significance—appears timely and important.

Other features of this issue are an illustrated article by Charles C. May on Grosvenor Atterbury's work on the designing and planning of an industrial village at Indian Hill, and an article by Peter B. Wight, describing at some length a bank building at Winona, Minn., designed by George W. Maher.

Mr. Wight states that the building is "unique and original." We are not greatly depressed to learn that this building is unique, if by that is meant that it is the only one of its kind. Also, we are prepared to accept the statement as to its originality.

An article of practical interest and value in this issue is Charles L. Hubbard's contribution on Recent Developments of the Theory of Ventilation.

The portfolio of current architecture is a somewhat heterogeneous collection of material. The details of subjects will be found in our index.

* * *

The principal subject illustrated in *The Architectural Review* for December is

(*FROM THE BRICKBUILDER*)

FIRST CONGREGATIONAL CHURCH, TOLEDO, OHIO
MILLS, RHINES, BELLMAN & NORDHOFF, *ARCHITECTS*

(*FROM THE INTERNATIONAL STUDIO*)

OLD KEW BRIDGE
FROM THE OIL PAINTING BY FRANK BRANGWYN

a building at New Bedford, Mass., for the Merchants National Bank, by Adden & Parker, Architects. This is a well balanced, carefully designed structure and has been admirably presented.

A country house by Tallmadge & Watson, after their usual manner, and a picturesque house at Harvard, Mass., designed by Ralph M. Gray, are also illustrated.

The versatility of Baldassare Perruzzi, architect, painter and engineer, whose period was that of the fifteenth century, is shown in an interesting article, well illustrated, that appears in this issue. It is by W. W. Kent. Mr. Danied Paul Higgins continues his series on the "business" of architecture.

The Symposium on Advertising in Relation to Architecture is continued, and in this issue we find letters from Albert

Kelsey, Irving K. Pond and C. A. Whittemore.

Mr. Kelsey is of the opinion that the better element of the profession needs to have its standards and ideals advertised, Mr. Pond states that he is "a bit lukewarm" on the subject, while Mr. Whittemore believes that "individual advertising among architects would undoubtedly create a chaotic condition, especially in the minds of those who wished the services of an architect but who did not personally know any member of the profession.

The consensus of opinion so far expressed by the contributors to this sym-

(FROM THE BRICKBUILDER)

MASONIC TEMPLE, SALEM, MASS.
L. S. COUCH, *ARCHITECT*
LITTLE & BROWNE, *ASSOCIATE ARCHITECTS*

posium would appear to be that duly constituted bodies in the profession may with propriety take such steps as would acquaint the general public with the duties or functions of an architect, the value of his services and his true relation to his client, but that any individual setting forth of these things would be unethical, and for that reason highly undesirable.

* * *

Further illustration of recent designs in domestic architecture in Scotland will be found in the December issue of *The International Studio.*

A particularly well executed color plate of a house and garden in Surrey, designed by the late C. E. Mallows, is reproduced. Mr. Mallows' work in domestic architecture is too well known by architects on this side of the Atlantic to need extended comment.

(FROM THE ARCHITECTURAL REVIEW)

HOUSE FOR GUSTAVUS BABSON, ESQ., OAK PARK, ILL.
TALLMADGE & WATSON, *ARCHITECTS*

Men in England seem to appreciate at its proper value the necessity for sketching and the large educational value of a thorough knowledge of color.

Much of the work in domestic architecture done abroad has the picturesque quality developed to the highest degree.

(FROM THE INTERNATIONAL STUDIO)

"ROYCROFT," BROUGHTY FERRY
MACLAREN SONS AND SOUTAR, *ARCHITECTS*

This is, we believe, the result of much sketching afield, and that the spontaneity of design, the very artistic handling of material are the products of a well-stored and well-trained artistic mind and an eye

that does not need the photographic suggestion to attain its desired end.

The recent successful exhibition of the Arts and Crafts Society at the Royal Academy is described and illustrated in a series of articles, the second of which appears in this issue.

The usual number of well-written reviews on current phases of art complete an interesting number.

* * *

Illustrations of Masonic Temples of varying degrees of excellence and venerability are featured in *The Brickbuilder* for December. The descriptive article is by H. P. Knowles. There is also illus-

(FROM THE WESTERN ARCHITECT)

WINONA SAVINGS BANK AND WINONA NATIONAL BANK, WINONA, MINN.
GEORGE W. MAHER, *ARCHITECT*

trated in this issue the First Congregational Church in Toledo, Ohio, designed by Mills, Rhines, Bellman & Nordhoff.

Copartnership Housing in England is discussed by Robert Randall. This issue further contains a description of an industrial village at Marcus Hook, Pa., and illustration of a number of workingmen's houses at Massena, N. Y., designed by Albert H. Spahr.

* * *

A writer in the January issue of *Good Furniture* sees in the recent Volpi sale in New York, when the contents of the Dovanzati palace were dispersed at auction, a real awakening in this country as to the artistic value of genuine works of the decorative arts.

As the subject is treated with evident authority and knowledge of facts and conditions, it affords an opportunity for collectors, both amateur and professional, to acquire a good knowledge of just what is desirable in these things and just what may well be avoided. The lures that are set for the entanglement of the dilettante in art are so many and so subtle, it is well to acquire some measure of reliable information if one is to venture into this field.

Mr. William Laurel Harris contributes an article of much interest on "Byzantine Furniture and Fabrics in Italian Church Mosaics and Ivory Carvings" and H. D. Eberlein has contributed the first of a series of articles on Old Spanish Furniture. Mr. Bach's series on "Foreign Artists in French Furniture Design" reaches its sixth installment.

The usual collection of well-selected examples of furnished interiors is presented.

* * *

The Journal of the American Institute of Architects publishes in the January issue the address of Grant La Farge, on Education and Public Taste, delivered before the recent convention at Minneapolis. It is a scholarly and thoughtful paper.

The much-heralded structural service department has its inception in this issue.

In its initial presentation it would appear to be merely a classified bibliography and index to technical and trade information. The value of such a compilation will depend largely upon how well the architect has kept his own office files. It is safe to say that practically nothing is given that is not already known, at least in a general way, to the profession. The later development of this department may perhaps disclose a greater value.

The official notice of awards by Beaux-Arts Institute of Design of judgments made last November is now printed, as are also the usual chapter notes and announcements by the institute.

An interesting feature of the illustrations is a series of eight etchings by Henry Winslow.

MAIN ENTRANCE, ADMINISTRATION BUILDING, SEARS, ROEBUCK & CO., CHICAGO

MESSRS. NIMMONS & FELLOWS, *ARCHITECTS*

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, FEBRUARY 21, 1917 NUMBER 2148

OFFICE BUILDING, MALLEABLE IRON RANGE CO., BEAVER DAM, WIS.
MESSRS. LOCKWOOD, GREENE & CO., *ARCHITECTS AND ENGINEERS*

SOME ESSENTIALS IN THE CONSTRUCTION OF AN INDUSTRIAL BUILDING

By W. FRED DOLKE, JR.
Lockwood, Greene & Company, Boston, Mass.

AN industrial building, in its essential characteristics, is a structure designed and erected to house an industry. As such it supports and protects the machinery, both inanimate and human, which constitutes the productive factor, and the goods which are the product of the manufacturing process.

Consequently, no matter what other factors may enter into the design of an industrial building, the primary essential, the most important consideration of all, is utility. Under the stress of modern business competition and conditions economical operation of the factory is the determining feature on the profit and loss page of the ledger.

It is no exaggeration to say that the majority of the industrial concerns of this country are laboring under excessive operation charges because of adverse manufacturing conditions, brought about either through the initial selection of unsuitable types of buildings, or through arrangements of departments which are entirely illogical, arrangements necessitated by the building itself. Therefore, the most important essential in the design of a new factory building is that the structure shall so serve the needs of the particular industrial enterprise that, so far as the influence of the building itself is concerned, the operation charges will be reduced to a minimum.

Because of conditions which will arise from limitations of the property, such as existing buildings or the shape or size of the lot, it is not possible to completely

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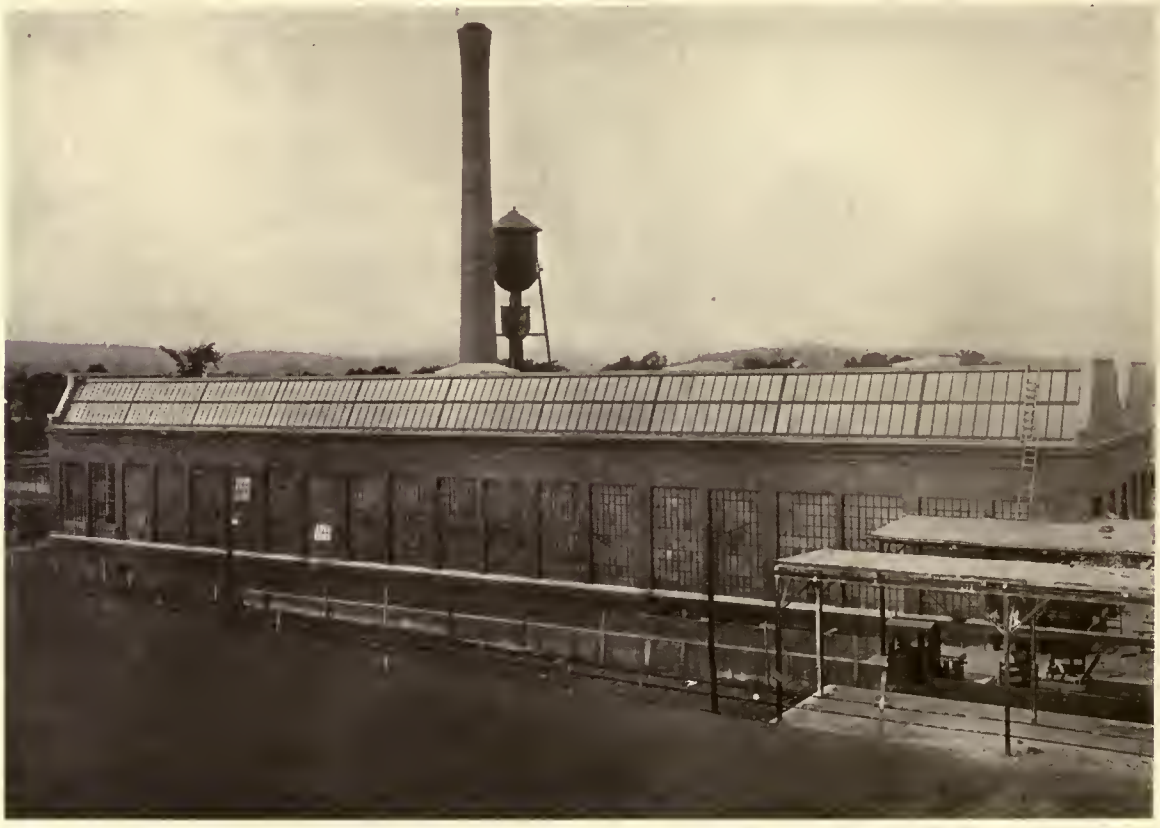
achieve this ideal, except in those rare cases where a new plant is to be erected on a large unencumbered plot of land. In either case, however, it is necessary to economical design that the designer shall have a clear working knowledge of all the machinery to be installed, of the processes to be carried on, and of the plan which will be followed in the finished plant for the administration of the manufacturing work.

The most important preliminary drawings are the machinery plans and the sketches which show the progress of materials through the various parts of the factory. These must be studied and pondered over until that arrangement of department and machines has been reached which under all the conditions will be productive of the most economical operation. The architect, on the basis of these drawings, must construct in his imagination a phantom picture of the finished machinery layout with all the departments in their proper places, and then in his vision will gradually unfold under and around and over this picture the image of a building which in all its fundamental characteristics will be exactly suited to the enterprise in hand.

It is evident of course that the amount of this kind of study necessary will vary from almost nothing in the case of a small addition to an existing plant to a maximum of effort when an entirely new and large plant is to be designed. The principle, however, will always remain that the primary essential of an industrial building is utility.

With the fundamental characteristics determined, the architect will find that the solution of other essential requirements will follow easily. In fact many essentials will almost automatically determine themselves. Certain predetermined preferences of the owner will point the way in some instances; questions of cost or expediency will determine others.



ENAMELING BUILDING, ACME WIRE CO., NEW HAVEN, CONN.
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FACTORY, SETH THOMAS CLOCK CO., THOMASTON, CONN.
MESSRS. LOCKWOOD, GREENE & CO., *ARCHITECTS*

The type of building will have been settled by the limitations of the property and by the machinery layout. The type of construction to be used will depend on many conditions which must be carefully examined for each job. Only in isolated and exceptional cases should ordinary wood construction be used, and even then the architect, for the sake of his own and the profession's reputations, if for no other reason, must emphatically register his disapproval of the erection of "fire-food."

Anyone who has followed the changes in modern industrial methods is familiar with the new attitude of the up-to-date factory manager with regard to fireproof construction. No longer is it merely a question of getting the most advantageous insurance rate, it is a question of life itself. The manufacturer now says, "A disastrous fire in my plant would practically put me out of business. Fire insurance would never repay me for loss of business, loss of prestige, least of all for the certain loss of my force of skilled operators. The struggle to rebuild and re-equip a new plant, to train a new force of employees, to get back lost business in the face of to-day's strenuous competition, would require an outlay of capital and effort which would be beyond my resources."

Consequently it is essential that a plant shall be at least highly fire-resisting. Standard mill construction with first-class automatic sprinkler equipment will be satisfactory for many industries, while others, in which the fire hazard is greater, will certainly require fireproof construction.

Abundance of daylight is now an accepted essential in factories. In fact, any added expense which may be necessary within reasonable limits to secure a full measure of natural light will be justified. Well lighted workrooms unquestionably make for good health, relieve eye strain,

tone up a working corps, insure a better product with less waste, and reduce the hazard of accidents.

Many industries require the concentration of heavy machinery in a small space, a condition which subjects the floors and walls to a continuous daily vibration. In some cases high-speed machines which have reciprocating parts cause constant tremors to pass through the construction. However, in many of the older textile mills extraordinary conditions of vibration have existed for years without apparent serious results. It would seem, nevertheless, that in cases of heavy and constantly repeated shocks there may be danger of failure of local parts through fatigue of materials.

The most serious effect of vibration is that which it has on economical operation. Wherever vibration exists in such strength that it is noticeable, employees will instinctively be apprehensive of the failure of the building, they will suffer loss of efficiency due to fatigue, and in the long run their nervous systems will be seriously impaired.

There are instances, however, in which too great rigidity would be most undesirable for certain classes of machinery. For example, in weaving heavy fabrics, the breakage of loom parts has been excessive when looms are mounted on concrete floors with no provision for absorbing the shocks produced.

The problem of vibration, while not new, has yet to receive either full recognition or sufficient serious attention. Particularly is this statement true of the high loft buildings which are becoming common in our larger cities. The resulting economic losses are unquestionably large, if analyzed from all standpoints, and the elimination of vibration is consequently an important factor in the efficiency of any plant.

The health and comfort of employees is another serious factor in economical

BUILDING OF DIAMOND MATCH CO., OSHKOSH, WIS.
MESSRS. LOCKWOOD, GREENE & CO., *ARCHITECTS AND ENGINEERS*

ENGINE ERECTING SHOP, SHEFFIELD CAR CO., THREE RIVERS, MICH.
MESSRS. LOCKWOOD, GREENE & CO., *ARCHITECTS AND ENGINEERS*

operation, and good air, sanitary provisions well placed, and good plumbing are therefore essentials in the design of an industrial building.

Plenty of good, clean atmosphere full of oxygen is necessary to full efficiency of any worker. In certain industries, such as the rubber works and match factories, where the processes are productive of heavy fumes, it is imperative that fresh air be continuously blown in. In the older Cuban tobacco works, where most primitive conditions prevail, it is necessary to provide readers to keep the workers from falling asleep, while in modern American cigar factories where more ideal conditions of ventilation prevail, the tobacco fumes can hardly be detected.

Anyone of good taste who has occasion to inspect the toilet facilities in some of the older mills and factories cannot keep down a feeling of disgust at the conditions he finds. Certain it is that the self-respecting skilled workman will not maintain his connection with a plant which expects him to work under such filthy conditions. It is true, undoubtedly, that many workers are yet unable to appreciate good, clean sanitary conveniences, but that this state is rapidly passing away is shown by the stringent plumbing laws so many States have enacted.

In an organization of highly skilled workmen, the toilet facilities should be of the best, as these employees are of so much value to a factory that no point should be overlooked which will make their working conditions more attractive to them. In other plants, however, whose employees, from the rough and begriming nature of their work, do not appreciate the finer qualities, the plumbing installation should be designed for simplicity and sturdiness.

Recreation and rest rooms, hospitals, dining rooms, libraries, and company schools are all now rightfully recognized as playing essential parts in the economical operation of a plant. The human machine must not only be surrounded by the right conditions to work at its best, but modern competition has set a pace so rapid and has so intensified and speeded up man's work that the employee needs every

available agency to improve his conditions and surroundings.

It is for this economic reason, if for no other, that manufacturers have been weaned away from the old idea that a factory building *per se* must be a blot on the landscape. Man's response to his environment is a recognized phenomenon of everyday life. Not only will a workman take pride in his position in a factory which is attractive and interesting in its appearance, but he will unconsciously feel its influence to keep him steady and faithful—not alone to his job, but also to his home and to the community.

To an architect it may seem a waste of time to argue that a building should be so designed as to be beautiful in its appearance. But many manufacturers have yet to learn that beauty and attractiveness in buildings are the distinguishing marks in civilization and that it is their duty as leaders in the industrial world to build structures which will raise the mental and moral standards of the industrial workers. The employer is without doubt "his brother's keeper" and as such his duty is plain.

The essential and fundamental characteristic of a factory building will always be utility, but side by side with it now stands that other requisite, attractiveness. Attractiveness, or beauty, means simply good taste. There are many essentials in the construction of every building, such as windows, piers, copings, which can be so grouped and spaced, so molded, that beauty results with little extra cost. Beauty does not mean lavishment. It means simplicity and good taste in disposition of members, and in use of materials.

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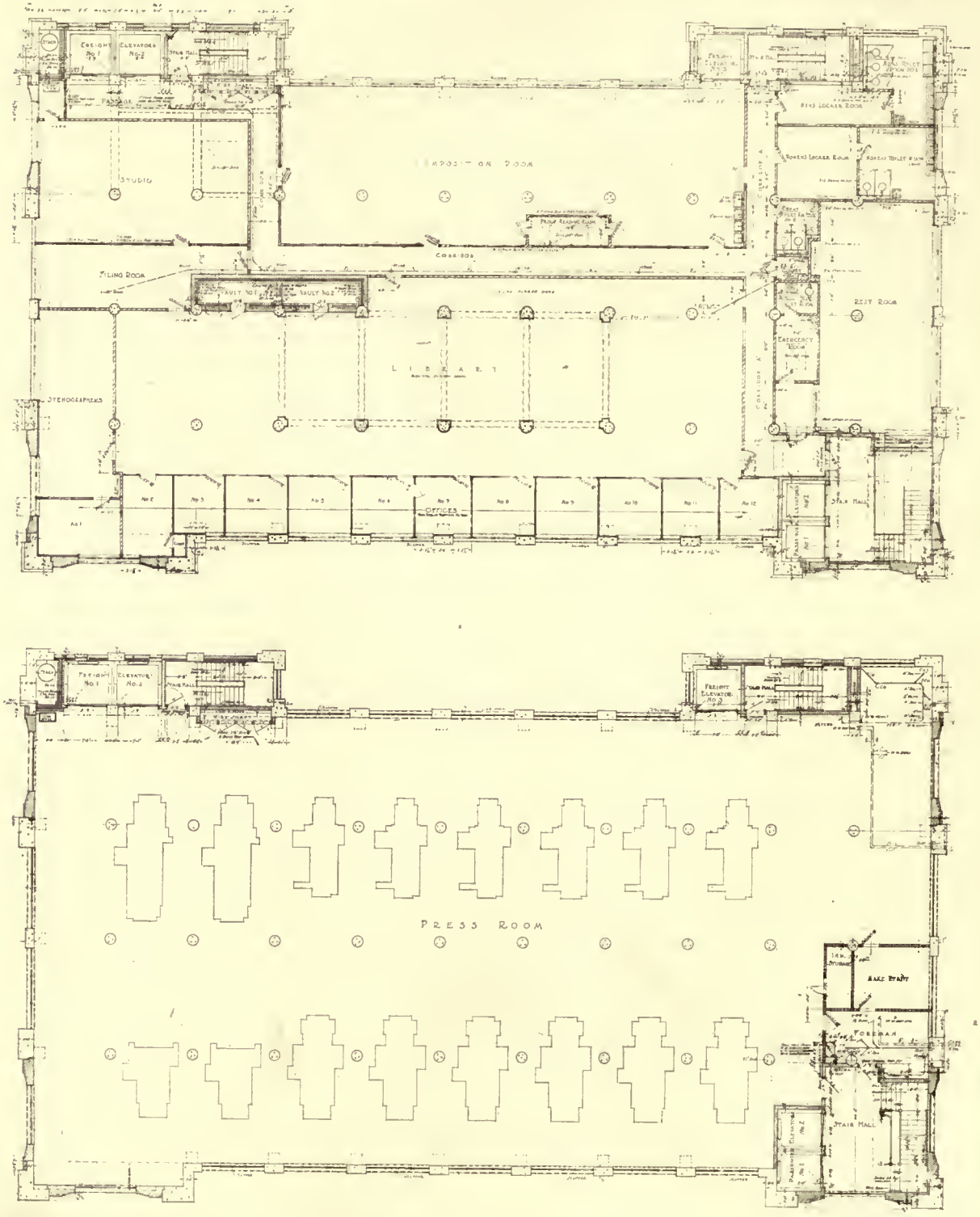

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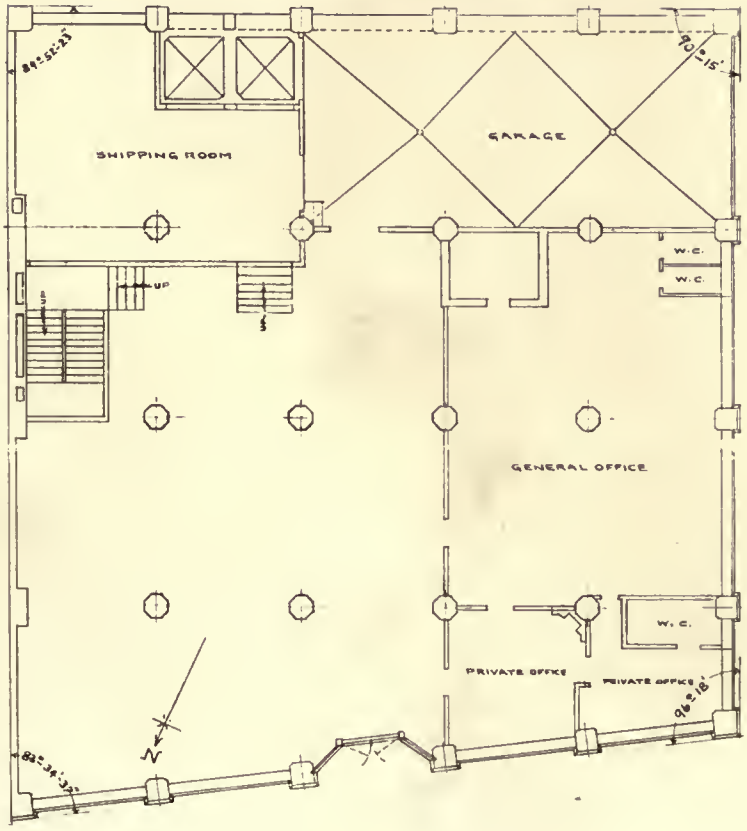

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116 19

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VIEW ACROSS SUNKEN GARDEN IN FRONT OF ADMINISTRATION BUILDING

MAIN PLANT—SEARS, ROEBUCK & CO., CHICAGO, ILL.

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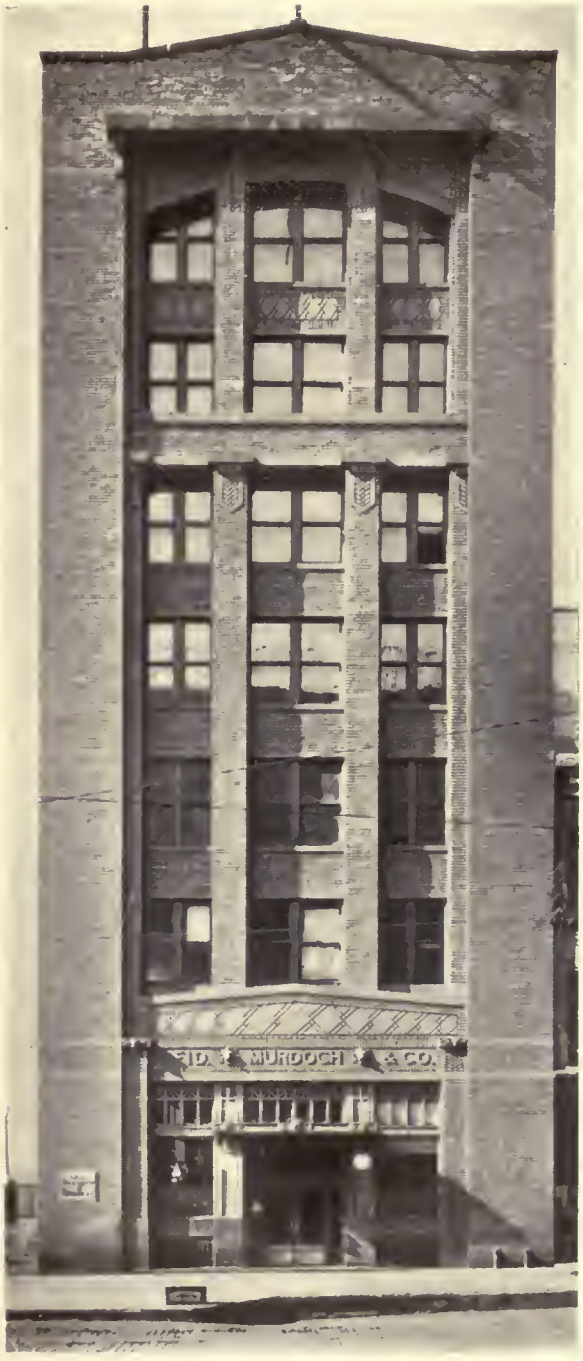

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FACTORY ENTRANCES

THE ARCHITECTURAL OPPORTUNITIES OFFERED IN THE DESIGN OF ENTRANCES TO FACTORIES AND SIMILAR BUILDINGS

By F. M. GARDINER

THE title "Factory Entrances" has been chosen advisedly in preference to a considered alternative "Industrial Entrances." The latter would cover, perhaps, a broader field, but the major portion of that field is covered by the former, and the types of buildings which would be classed under "Industrial" but not under "Factory" are more apt to have the proper amount of attention given to them as problems in architectural as well as in structural design.

In a previous issue of THE AMERICAN ARCHITECT the writer treated, briefly, the subject of architecture as applied to industrial buildings from an economic standpoint. In selecting a subject for a further article architectural detail in general, as applied to factories, and architecture in factory offices were considered as well as the subject chosen. It was felt, however, that the field covered by factory offices was rather limited, inasmuch as it applied, except for interior design, only to plants which could boast separate office buildings, and that the entrance covered the essential principles of detail, and could be treated in a less involved manner than a discussion of all the separate architectural details contingent to the design of factory buildings.

It is not intended to vaunt the entrance as the one feature to be considered architecturally, far from it. Of first importance, always, is the study of the composition as a whole, but in the matter of detail the entrance stands pre-eminent, and has greater power to add to, or detract from, the attractiveness of the whole than any other single unit.

DETAIL OF ENTRANCE
PROVIDENT LIFE & TRUST CO., PHILADELPHIA
MESSRS. DAY & ZIMMERMANN, *ARCHITECTS AND ENGINEERS*

It would be hard to select better instances of the ability of the entrance to give character to a building than that of some of the smaller churches designed by Cram, Goodhue and Ferguson, in which all of the ornamentation is concentrated about the entrance. Plain, uncompromising stucco walls, with a riot of decoration at the entrance which reacts upon the eye in much the same way as a brilliant spot of vermillion in an otherwise drab-colored painting.

It may seem rather far-fetched to apply ecclesiastical to industrial architecture—and yet the underlying principle

DETAIL, MAIN ENTRANCE

PHILADELPHIA TEXTILE MACHINERY CO., PHILADELPHIA, PA.

MESSRS. DAY & ZIMMERMANN, *ARCHITECTS AND ENGINEERS*

is precisely the same. There is this difference, however, in its application, that whereas in other types of buildings the "spot of color" if it may be so called is not limited to the design of the entrance, in

ENTRANCE TO OFFICES OF WARNER BROS. CO., BRIDGEPORT, CONN.

MESSRS. DAY & ZIMMERMANN, *ARCHITECTS AND ENGINEERS*

the design of factory buildings it often happens that the entrance is the one spot which can be treated with any great view to architectural expression.

Factories may or may not have cornices, they may or may not have buttresses, they may or may not have towers—affording opportunity for the architect's skill in design—but they *must* have entrances. If circumstances are such that little or no architectural expression can be given to the factory as a whole, the entrance, at least, should be allowed pleasurably to impress the eye and to give to the throngs which pass and repass, the keynote to the standards and practices which are behind it.

The entrance is a detail made up of details, and what it lends to the whole of which it is a detail must be given it largely by the smaller details of which it is itself composed. It should not only be appropriate to the class of industry housed by the buildings, but its details should be so designed and blended as to give, insofar as possible, a suggestion of the characteristics of the business with which they are connected. If the building itself is designed with this in view, and the entrance is designed in harmony, the effect in detail will follow of itself. Interesting results are often obtained, as shown in some of the accompanying illustrations, by the use of trademarks or other significant insignia, properly applied—these in themselves indicate to the casual observer, at least to some extent the nature of the contents of the building or the occupation of the firm which occupies it.

More subtly an entrance may express the attitude of the buildings' owners. Often one sees an entrance that leaves a

(*Continued on page* 123)

ENTRANCE TO KENT BUILDING, BROOKLYN, N. Y.

MESSRS. DAY & ZIMMERMANN, *ARCHITECTS AND ENGINEERS*

DETAIL OF MAIN ENTRANCE

FACTORY OF ARTHUR COLTON CO., DETROIT, MICH.
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VOL. CXI FEBRUARY 21, 1917 No. 2148

THE PRACTICAL VALUE ATTACHING TO GOOD ARCHITECTURE

IN a letter received from a firm of architects, referring to an important industrial building recently completed, it is stated: "So thoroughly have the features of safety, comfort, convenience, and hygiene been conserved in connection with the design and equipment of this building that the changes in the working personnel have been almost negligible, and there is a large list of applicants eager to fill the first vacancies."

This statement describes a condition in our larger industries that, fortunately, is each year becoming more usual. Promoters of large industrial enterprises are realizing that to insure the best results, the highest efficiency, and consequently the best character of product, it is necessary to take into consideration the attitude of labor toward its employers and the facilities they furnish their employees. It is undoubtedly true that no man can render service up to the limit of his ability where his labor is not performed under the most favorable environment. Conversely, when men find that while they are but a cog in a large and complicated piece of machinery, their employers realize that they are of sufficient importance to the general result to warrant thoughtful consideration for their welfare, both mental and physical, their labor acquires a certain dignity in their minds and they strive to give forth the best that is in them.

It might be difficult to incorporate esthetic features in all modern industrial buildings with the consent of the owners, using humanitarianism as an argument; but since in every instance where there have been expenditures of much time, thought and money to surround the working people with attractive features, it has been found to be a good commercial investment, there should no longer be difficulty experienced in accomplishing this result if the architect has collected proper and sufficient data on the subject. Strikes and the discontent that leads to them, dissatisfaction and indifference, the enemies of efficiency, have all in a large measure been overcome by the builders of the most modern and artistic "plants"; and as these conditions contribute to dividends and also serve to popularize any product made under them, they present an argument that even the most matter-of-fact boards of directors can understand, and the potency of which they will readily admit. In fact, if the pride of employment and the large measure of contentment indicated by the letter from which we have quoted is at all general, architects, in their efforts to improve the architectural character of industrial buildings, will find that they can secure inestimable aid from the laboring classes who work in them.

A COMMON WEAKNESS IN INDUSTRIAL BUILDING DESIGN

THE following comment made by an architect of undoubted ability in design, would seem to be worthy of serious consideration by those whose work falls to some extent at least in the industrial building field:

"In looking through architectural publications presenting industrial plants it seems to me a common weakness in design, particularly where skeleton construction either of reinforced concrete or steel is used, that the corner bays or end

pavilions are weak in appearance in that the window openings are carried too close to the corner of the building. Where the structure is constructed between two lot lines flanked by adjoining buildings there is, no doubt, good excuse for this, but where the structure stands free and light may be drawn from both directions it is difficult to understand why the designer should not make a stronger pier and thereby bind in his composition, since there is light in abundance and to spare under these circumstances."

Here is a specific criticism the justice of which will probably be acknowledged, applying to industrial buildings generally. Unfortunately, it also applies, although to a lesser degree, to other types of buildings, in which, however, there is greater excuse by reason of the practical requirements, which more often occur and dominate the design. There are, as has been shown, a number of expedients that can be utilized by a resourceful designer to overcome in part the unsatisfactory appearance of a thin and insufficient corner pier, when such a pier is believed to be unavoidable. Before reaching the conclusion that it is unavoidable, however, it is usually well to make careful and detailed analysis of the supposed or assumed practical advantages of the narrow corner pier. In a great number of instances such analysis will result in demonstrating that the advantages are wholly imaginary.

TRADEMARKED MATERIALS

UNDER present conditions with the cost of building materials advanced in most localities from fifteen to thirty-five per cent above prices current in 1915, it seems worth while to study the results obtained from various investigations made for the dual purpose of ascertaining causes of increases and effecting all possible economies. Of particular interest to both architects and owners engaged in such study are the reports of an inquiry recently conducted to determine the relative increases in cost of trademarked materials, compared with those sold without brand or other means of identification. It appears that in almost every instance the manufacturers of widely advertised, branded or trademarked goods were the last to increase the prices of their products. Further than that, with few exceptions the advanced cost of production had been assumed in part by the manufacturers in the case of trademarked goods, whereas in others it was passed along to the consumer entirely, if in fact it was not increased.

The result of the inquiry might have been foretold, as it simply demonstrates again the responsibility which the manufacturer of a trademarked article feels, and which is not shared by the maker of a non-branded material. Not only must a manufacturer of the trademarked goods stand behind them but he must avoid dissatisfaction, even with the price, to the limit of his ability, and a majority of them would rather assume a temporary loss of profits than to disturb relations with their customers by increasing prices. Where, as in the present instance, it is no longer possible to market their goods at the old price, it is found that they have increased their prices as little as is consistent with the maintenance of quality and continuation in business.

Viewed from any angle, it would seem that an architect is always protecting both his client's interests and his own reputation by selecting for use only those goods whose manufacturers are responsible, and who proclaim and make real that responsibility by marking their products so that they can be identified at all times, or at least until they have finally reached their respective places in the work for which they were intended.

FACTORY ENTRANCES

(*Continued from page* 119)

homelike impression, as though anyone were welcome, and as though the relations between employer and employee were on a somewhat more cordial and familiar basis than might be expected in the present day of intense efficiency. On the other hand, perhaps as often, the impression is given of dignity, of quiet moving, majestically turning machinery and soft-treading secretaries. Yet again the aspect may be forbidding, as though "leave hope behind all ye that enter here" were engraved above, though it is gratifying to note that this is more often true of the older type of factory than of the more modern, just as disregard of employee and public was more common a decade ago than it is to-day.

So far the subject has been treated as would apply for the most part to factories where one, or possibly one main entrance and a subsidiary entrance were all that were necessary. While what has been said applies in general to all factory entrances, it must be remembered that in plants of any size, comparatively speaking, there are not one or two, but many entrances, each with a purpose of its own. Insofar as possible the character of all the entrances should conform to one type, but at the same time, each should express its particular use. Width and height will in themselves often effectively suggest the purpose for which the entrance was designed, and thereby simplify the problem. On the other hand, where the only difference in purpose lies in the class of work carried on by those who pass through it, its distinctive purpose must be brought out by expression in its design of the work with which it is connected. The so-called "Double Duty" entrance deserves a word here, as it seems peculiarly to express co-operation between distinct units. This is particularly true where employers' and employees' entrances are so treated, wherein both gain the advantage of retaining their individuality, at the same time giving the impression of close relationship.

The basis of application of the foregoing principles and suggestions is not confined to the design of entrances alone, but includes in its broader sense *all* detail, for it is founded on the fundamental principles of architectural design. From the study of the composition of the design as a whole down to the design of the least important detail, these principles hold true —that the design shall be appropriate to the purpose for which the building is to be erected; that each part of the building shall conform to its surroundings, that the design of the exterior shall express the design of the interior; that the whole, and each part, shall express the use to which it is to be put; that the whole shall be so proportioned, outlined, and assembled as to satisfy the eye. It might well be said, "On these hang all the law and the prophets of architectural design."

In Acknowledgment

Acknowledgment is hereby made and our thanks extended to Aberthaw Construction Co., Boston, Turner Construction Co., New York, and to the many Architects and Engineers who have rendered valuable assistance and co-operation in the preparation of this special issue.

A Correction

In attributing to Mr. William Emerson authorship of the article on "The Open Stair Tenement," in our issue of February 14, it was by error stated that Mr. Emerson was a Fellow of the Institute. The title should have read, Member of A. I. A. The origin of this error was entirely with the editorial department of THE AMERICAN ARCHITECT.

GROCERY BUILDING, SEARS, ROEBUCK & CO., CHICAGO, ILL.
MR. GEORGE C. NIMMONS, *ARCHITECT*

REQUIREMENTS FOR THE HEATING AND VENTILATION OF INDUSTRIAL BUILDINGS*

MEASURES TAKEN IN DIFFERENT STATES TO INSURE SUITABLE WORKING CONDITIONS IN FACTORIES

WHILE the factory inspection laws of all the States provide in a general way for healthful working conditions in factories, workshops and mercantile establishments, there are apparently but thirteen States that have definite regulations on the subject. These are New York, Massachusetts, Ohio, Illinois, Arkansas, Indiana, Iowa, Pennsylvania, Michigan, Minnesota, New Jersey, Wisconsin and California.

New York

Under the present so-called "Labor Law" in New York State all matters pertaining to the heating and ventilation of industrial buildings are in the hands of an industrial commission under whose direction the State Department of Labor is conducted. According to the law, this commission "shall have the power to make rules and regulations for and fix standards of ventilation, temperature and humidity in factories and may prescribe the special means, if any, required for removing impurities or for reducing excessive heat, and the machinery, apparatus or appliances to be used for any of said purposes, and the construction, equipment, maintenance and operation thereof,

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in order to effectuate the purposes of this section."

The law also provides for a bureau of inspection which includes the bureau of factory inspection.

The general terms of the law covering factory ventilation are as follows:

The person operating every factory shall provide in each workroom thereof, proper and sufficient means of ventilation by natural or mechanical means, or both, as may be necessary, and shall maintain proper and sufficient ventilation and proper degrees of temperature and humidity in every workroom thereof at all times during working hours.

As regards mercantile establishments a special section (Section 168-f) states that "every mercantile establishment shall be provided with proper and sufficient means of ventilation by natural or mechanical means, or both, as may be necessary and there shall be maintained therein proper and sufficient ventilation and proper degrees of temperature and humidity at all times during working hours. The industrial board shall make rules for and fix standards of ventilation, temperature and humidity in mercantile establishments."

RULES MADE BY THE INDUSTRIAL COMMISSION

In accordance with the foregoing sections of the "Labor Law," the Industrial Commission has promulgated a number of rules which have come to be known as the "Industrial Code." They are published, as compiled up to July 1, 1916, by the State Department of Labor, together with the law itself.

Violations of the provisions of the labor law are punished by fines running from $20.00 to $50.00 for the first offense.

SEATTLE PLANT, SEARS, ROEBUCK & CO.
MR. GEORGE C. NIMMONS, *ARCHITECT*

FIRST UNIT, KANSAS CITY PLANT, SEARS, ROEBUCK & CO.
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Second and third offenses incur penalties running up to $250.00 and imprisonment for 60 days.

Massachusetts

The Massachusetts law is enforced by the Building Inspection Department of the District Police and reads as follows:

"Section 15. No building which is designed to be used, in whole or in part, and no building in which alterations shall be made for the purpose of using, or continuing its use, in whole or in part, as a public building, public or private institution, schoolhouse, church, theater, special hall, public hall, miscellaneous hall, place of assemblage or place of public resort, or as a factory, workshop or mercantile or other establishment and to have accommodations for ten or more employees, and no building more than two stories in height, designed to be used above the second story, in whole or in part * * * shall be erected, and no alteration shall be made therein, until a copy of the plans and specifications thereof has been deposited with the supervisor of plans of the building inspection department of the district police by the person causing its erection or alteration, or by the architect thereof. Such plans and specifications shall include those for heating, ventilating and sanitation, as the supervisor of the plans may require."

A fine of from $500.00 to $1,000.00 is provided for anyone who violates the provision of this requirement.

Ohio

The Ohio law governing factory and building inspection states in Section 989 that each district inspector of workshops and factories assigned to a district for the inspection of shops and factories therein, shall carefully inspect the sanitary conditions, system of sewerage

SEATTLE, WASH., PLANT, SEARS, ROEBUCK & CO.
MR. GEORGE C. NIMMONS, *ARCHITECT*

* * * system of heating, lighting and ventilating rooms where persons are employed at labor," etc.

The term "shops and factories" includes the following: Manufacturing, mechanical, electrical, mercantile, art and laundering establishments, printing, telegraph and telephone offices, railroad depots, hotels, memorial buildings, tenement and department (apartment) houses.

The penalty for failing to comply with the provisions of the code within 30 days varies from $100.00 to $300.00 with each offense.

Additional provisions are included (Section 6330-2) covering especially dangerous works or processes.

In Cleveland, Ohio, a new building code became effective October 14, 1913. It is known as Ordinance No. 29,798. This code has the following relating to "factories and workshops":

"Every building, room or part thereof hereafter erected for, or converted to use as a factory or workshop in which there shall be less than 20 sq. ft. of floor space for each employee or occupant, shall have in operation, while occupied, a mechanical system of ventilation so designed and installed as to provide at least six complete air changes per hour.

"Unless natural ventilation is provided as required by the ordinances of the City of Cleveland, and maintained while occupied, every factory in which there is more than 20 sq. ft. of floor space for each employee or occupant, shall have in operation, while occupied, a system of ventilation so designed and installed as to provide at least four complete air changes per hour."

Illinois

The Illinois law regarding the heating and ventilation of factory buildings is probably the most explicit of any so far

enacted in this country. It is entitled, "An act to provide for the health, safety and comfort of employees in factories, mercantile establishments, mills and workshops in Illinois and to provide for the enforcement thereof." (Re-enacted and approved June 29, 1915. In force July 1, 1915.)

Section 10 reads: "In every factory, mercantile establishment, mill or workshop, where one or more persons are employed, adequate measures shall be taken for securing and maintaining a reasonable and, as far as possible, equable temperature, consistent with the reasonable requirements of the manufacturing process. No unnecessary humidity which will jeopardize the health of employees shall be permitted."

The meat of the law is in Section 11 which reads: "In every room or apartment of any factory, mercantile establishment, mill or workshop, where one or more persons are employed, at least 500 cu. ft. of air space shall be provided for each and every person employed therein, and fresh air, to the amount specified in this act, shall be supplied in such a manner as not to create injurious drafts, nor cause the temperature of any such room or apartment to fall materially below the average temperature maintained: Provided, where lights are used which do not consume oxygen, 250 cu. ft. of air space shall be deemed sufficient. All rooms or apartments of any factory, mercantile establishment, mill or workshop, having at least 2,000 cu. ft. of air space for each and every person employed in each room or apartment, and having outside windows and doors, shall not be required to have artificial means of ventilation; but all such rooms or apartments shall be properly aired before beginning work for the day and during the meal hours. All such rooms, or apartments, having less than 2,000 cu. ft. of air space, but more than 500 cu. ft. of air space, for each and every person employed therein, and which have outside windows, and doors whose area is at least one-eighth of the floor area, shall be provided with artificial means of ventilation, which shall be in operation when the outside temperature requires the windows to be kept closed, and which shall supply during each working hour at least 1,500 cu. ft. of fresh air for each and every person employed therein. All such rooms or apartments, having less than 500 cu. ft. of air space for each and every person employed therein, all rooms or apartments having no outside windows or doors, and all rooms or apartments having less than 2,000 cu. ft. of air space for each and every person employed therein, and in which the outside window and door area is less than one-eighth of the floor area, shall be provided with artificial means of ventilation, which will supply during each working hour throughout the year, at least, 1,800 cu. ft. of fresh air for each and every person employed therein: Provided, that the provisions of the preceding portions of this section shall not apply to storage rooms or vaults: And, provided, further, that the preceding portions of this section shall not apply to those rooms or apartments in which manufacturing processes are carried on which from their peculiar nature would be materially interfered with by the provisions of this section. No part of the fresh air supply required by this section shall be taken from any cellar or basement.

"The following terms of this section shall be interpreted to mean: the air space available for each person is the total interior volume of a room, expressed in cubic feet, without any deductions for machinery contained therein, divided by the average number of persons employed therein.

"Outside windows and doors are those connecting directly with the outside air; the window and door area is the total area of the windows and doors of all outside openings; and the floor area is the total floor area of each room."

Section 20 covers the ventilation of toilet rooms to the effect that, "where practicable, they shall have direct ventilation with the outside air; where it is impracticable (to so locate them), they shall be placed in an enclosure * * * and separately ventilated.

Fines for failure to comply with the foregoing provisions run from $10 to $50

BUILDING OF SCHLIEDER MFG. CO., DETROIT, MICH.
MESSRS. PRESTON, BROWN & WALKER, *ARCHITECTS*

for the first offense, and from $25 to $200 for the second or subsequent offense.

All buildings and rooms occupied by butterine and ice cream manufacturers must be provided with air shafts, windows and ventilating pipes sufficient to insure ventilation. The factory inspector directs such installations.

Arkansas

Factory ventilation requirements in Arkansas are contained in the Workmen's Compensation Law.

Indiana

The Indiana law on ventilation of industrial buildings states that "there shall be sufficient means of ventilation provided in each workroom of every manufacturing or mercantile establishment, laundry, renovating works, bakery, or printing office within the state, and the chief inspector shall notify the owner in writing to provide or cause to be provided ample and proper means of ventilation for such workroom."

Owners or agents are to be prosecuted for non-compliance with the law within twenty days. The law also provides for exhaust fans for carrying off dust from emery wheels, grindstones and dust creating machinery, the size of mains, etc., being specified.

Pennsylvania

The Pennsylvania requirements regarding blowers and exhausters for use with grinding and polishing machinery are enforced by the Industrial Board of the state. This board publishes a set of directions covering suction test and piping, and other features.

Minnesota

The Minnesota law after specifying that each employee must have not less

than 400 cu. ft. of air space unless reduced by a special order of the Commissioner of Labor, goes on to provide for "sufficient means of ventilation" where excessive heat is created, or if steam, gases, vapors, dust or other impurities that might be injurious to the health, are generated.

New Jersey

The New Jersey law provides for exhaust systems in workshops where emery wheels or emery belts of any description are used. Regarding sizes of rooms, it is specified that not less than 250 cu. ft. of air space shall be provided for each employee, between 6 a. m. and 6 p. m., and not less than 400 cu. ft. of air space between 6 p. m. and 6 a. m.

Compliance with the law must be made within twenty days on penalty of $10 fine for each day beyond that limit. The requirements for mercantile establishments state that "the owner, agent or lessee of a place coming under the provisions of this act, or employer, shall provide in each mercantile establishment proper and sufficient means of ventilation; in case of failure, the commissioner shall order such ventilation to be provided."

A similar penalty clause is added as for workrooms.

Wisconsin

The requirements in Wisconsin are in the form of general orders of the State Industrial Commission.

"In Wisconsin the Industrial Commission has power to issue orders for any changes in existing and new systems. The factory head may make an appeal from the agent's ruling and if the majority of the commission decides against him, he must make the required changes. This decision can only be reached after the majority of the commission have visited his factory personally and examined the existing conditions."

LAUNDRY BUILDING, DETROIT, MICH.
MESSRS. MILDNER & EISEN, *ARCHITECTS*

New York State Board for the Registration of Architects

IN spite of the fact that the Board is reported to have met almost weekly for months past, it is stated that there have been a considerable number of complaints made from those whose applications have not been passed upon, although they have been on file for a year. The explanation is to be found in the fact that there have been received a total of two thousand applications, and the difficulty of going over them carefully is greater than was anticipated by the Board, or probably any one else. In fact, the labor involved has necessitated serious sacrifices of their own interests by members of the Board. The first three or four hundred applications were passed upon promptly and at little expense of time and effort in investigation. This was a result of the plan followed. In accordance with it there were selected from among the applications the names of those who were well known to the Board, and about whose qualifications there could be no question. After these had been disposed of the work began to be greater, and the difficulties have steadily increased. Up to the present time, of the two thousand applicants, eleven hundred have been notified that they will be licensed; about three hundred have been notified that they will not receive licenses; investigations concerning the remaining six hundred have not been concluded.

In their painstaking efforts to do exact justice under the law, the Board has even gone so far as to invite some fifteen or twenty applicants to appear personally before it and submit to oral examination in order to better determine the qualifications of the various candidates. There have been from twelve hundred to fifteen hundred sets of plans and specifications submitted in support of applications for licenses, and all of these have or will be examined by the Board. No diplomas will be issued until decisions have been made concerning all applications.

The Board for Registration—a title which is in a sense a misnomer, as it is really a Board for Examination, the registering being done by the Board of Regents of the State university—is a body acting under authority of a State law, and its hearings and records are open to the public. The Board desires, in fact, to be treated as a public body. There is no official business transacted behind closed doors.

Governmental Endowment of a Chair of Architecture

An endowment of £2,000 a year has been granted by the New South Wales Government for a Chair of Architecture at Sydney University; and it is claimed that this is the first occasion of a Government of the British Empire recognizing the national importance of architecture. A certain twinge of envy must therefore accompany our nevertheless sincere congratulations to the Government and to the architects of New South Wales. But the example is not merely for Governments, but for those universities upon whom it has not yet dawned that architecture, broadly considered, has in it all the essentials of a liberal education. This news from New South Wales brings us much nearer to the time when any university from which a well-endowed Chair of Architecture is excluded will be regarded as being hopelessly behind the times. Particulars of the Sydney Chair are not yet available, and it will be interesting to learn whether the conditions provide for the complete absorption of the professor in scholastic work, or whether the authorities adopt the more modern view that he shall be at liberty to keep in touch with actual practice.—*Architect and Contract Reporter.*

Personal

Mr. Maurice H. Finkel, architect, Detroit, Mich., has removed his offices to 309-311 Sun Building, that city, and would be glad to receive manufacturers' samples and catalogs.

Messrs. Walter Grant Thomas and Roscoe Plimpton DeWitt announce the opening of offices for the practice of architecture at 73 Tremont Street, Boston, Mass.

PLATE AND ANGLE SHOP, FORE RIVER SHIPBUILDING CO., QUINCY, MASS.
MESSRS. MONKS & JOHNSON, *ARCHITECTS AND ENGINEERS*

DESCRIPTION OF CERTAIN BUILDINGS ILLUSTRATED IN THIS ISSUE

Gardner Building, Providence, R. I.

MESSRS. F. P. SHELDON & SON, *Architects*

The general dimensions of the building are approximately 82 ft. by 82 ft. There are five stories and a basement. The foundation and superstructure are so designed that the building can be carried two stories higher whenever desired. When this extension is made, the present cornice will serve for a belt course. Having this in mind, the cornice was designed for the belt course of the future building, seven stories high, and, consequently, it is not as prominent as when the structure has assumed its intended proportions.

The ground floor is used for various offices and display room, shipping room and garage. The basement and stories above the first are used exclusively for the storage of paper.

The framework and floors are of reinforced concrete, beam and girder construction, designed to carry a live load on each floor of 250 lbs. per square foot. The exterior walls are covered with a brick veneer on the columns and panels under the windows, leaving the lower belt course, window lintels and sills, and cornice of exposed concrete.

Building of Defiance Paper Co., Niagara Falls, N. Y.

MESSRS. PRACK & PERRINE, *Architects*

The building of the new wall paper factory of the Defiance Paper Company at Niagara Falls, N. Y., is one of the largest wall paper factories in the United States. It is a flat slab building, and necessarily long to accommodate the printing machines. An elaborate heating system is provided with fans located on the roof and ducts distributing the hot air evenly over the paper for drying purposes. A number of special conveyors, elevators and spiral chutes are also installed, and the construction was easily adapted to such installations. The ornamentations in this case are of artificial stone and tile with a selected face brick, and it is expected that the extra cost of this finish will be amply repaid by its value as an advertising medium.

Canadian Factory of Wm. Wrigley, Jr., Co., Toronto, Ontario, Canada

MESSRS. PRACK & PERRINE, *Architects*

This structure is of the latest type of reinforced concrete flat slab construction. The buildings are kept immaculate and sanitary inside and out.

A part of these buildings are leased to allied businesses and they are in great demand.

The toilet arrangements in this building are quite elaborate; bubbling fountains, shower baths, tiled floors, etc., are much in evidence, with rest rooms for the employees well furnished, victrolas, reading rooms, etc. A shortage of help in either the office or shop is unknown at this

DODGE BROS. SERVICE STATION, NEWTON, MASS.
MESSRS. MONKS & JOHNSON, *ARCHITECTS AND ENGINEERS*

POPE BAKING CO.'S BUILDING, DETROIT, MICH.
MESSRS. MILDNER & EISEN, *ARCHITECTS*

plant, as the surroundings here are so pleasant for the employees that they cannot be induced to leave.

Robertson Cataract Electric Co., Buffalo, N. Y.

MESSRS. WOOD & BRADNEY, *Architects*

Office and warehouse 106 ft. by 80 ft., four stories and basement; floor loads 150 lbs.; steel sash windows; spread footings on piles; flat slab type of construction; sprinkler system.

Addition to East Pittsburgh Plant, Westinghouse Electric & Mfg. Co.

MESSRS. PRACK & PERRINE, *Architects*

The construction is steel and brick, with concrete roofs and heavy laminated wood floors and with concrete cornices and sills. All stories are equipped with cranes of 40-ft. span and heavy capacity. The buildings are located on a narrow strip of land and as originally planned were of uniform construction and appearance. A quick change in manufacturing operations necessitated building a forge shop and furnace building at one end to take care of war orders and this made the carrying out of the original treatment impracticable.

Shoe Factory, Wm. H. Walker & Co., Buffalo, N. Y.

MESSRS. LOCKWOOD, GREENE & CO., *Architects*

Seventy-eight by eighty feet, eleven stories and basement; floor loads 150 lbs.; floors are hard pine and maple on sleepers; steel sash windows; spread footings; beam and girder type of construction; sprinkler system.

Richman Bros. Building, Cleveland, O.

MESSRS. CHRISTIAN, SCHWARZENBERG & GAEDE
Architects and Engineers

This building is a reinforced concrete building of flat slab construction, and occupies a block. It is an E-shaped building, the main section being at the rear of the lot and extending from street to street. This section is 65 ft. by 322 ft. The two outer wings are 65 ft. by 130 ft. and the center wing 65 ft. by 46 ft. The depth of the building along the side streets is 195 ft. and the total frontage 322 ft.

The total floor space is 165,000 sq. ft. The floor finish is cement throughout, except in the lobbies, where red brick tile was used, and in the hospital, which has a gray ceramic tile floor. The hospital has a white glazed tile wainscot 7 ft. high.

The building is concrete frame with flat slab floors and brick curtain walls. The street and court walls are faced with brown Shervan brick, the pilasters being paneled with fire-flashed brick tile for the full height. The parapet has panels of hand-made mat tile.

The main entrance is in the center wing, the main lobby being used as an employment office. Just to the right of the lobby is the hospital and the girls' rest room. The upper floors of the center wing are used for toilet and locker rooms. This wing also contains the main stairway and the elevator. The main stair is a double width, double scissors stair, which will allow eight people to descend at the same time. There are four other stairways located in the outside corners of the building. Stairs are so laid out that nowhere is there a greater run than 100 ft. to a stairway.

The first floor of the south wing is used entirely for dining room service. This room is also used for dances and entertainments by the employees. The remainder of the first floor is used for shipping and finished stock storage.

Offices are located on the second floor. The third and flourth floors are the main operating floors.

The lobby walls are faced with 1½-in. fire-flashed brick with tile panels.

All sash in the building except those for show windows in front is of steel.

The building is heated and ventilated with an air blast system, an air washer being installed to insure pure air.

Warehouse, Manufacturers Outlet Co., Providence, R. I.

MESSRS. MONKS & JOHNSON,
Architects and Engineers

The Manufacturing Outlet Company is a large department store. This reinforced concrete warehouse is arranged as a garage on the first floor with shipping room, the basement is arranged as a sorting room for bundles and the upper floors are used for furniture storage. This building is of flat slab construction and is veneered on the outside with a light gray faced brick with terra cotta cornices and marble tile and terra cotta inserts.

Plate and Angle Shop, Fore River Shipbuilding Co., Quincy, Mass.

MESSRS. MONKS & JOHNSON,
Architects and Engineers

This building is 800 ft. long and 200 ft. wide in two spans of 100 ft. each. It is of steel and brick structure and is arranged on the second floor with a mold loft 600 ft. long and 100 ft. wide and a sheet metal shop 200 ft. long and 100 ft. wide. It is also arranged with offices, toilets, wash rooms, etc., built in the depth of the trusses between the first and second floor. This building is equipped with overhead cranes and also side wall cranes.

Kelly-Springfield Service Station, Newton, Mass.

MESSRS. MONKS & JOHNSON,
Architects and Engineers

Photograph No. 2 is a reinforced concrete structure, veneered with red tapestry brick with terra cotta inserts in the

frieze. This building was designed especially as a salesroom and warehouse for the Kelly-Springfield Company. It is fitted with an elevator, tire chutes, etc., and is heated by steam. The building is also equipped with sprinklers. It is in Boston and is located on Beacon Street. We have also sent you a photograph of the salesroom interior, which is finished with plastered walls and ceiling; all woodwork is of oak and the floor is all marble mosaic.

Oliver Chilled Plow Works, St. Louis, Mo.

MESSRS. PRACK & PERRINE, *Architects*

A reinforced concrete warehouse and one of a series of similar buildings used by this company in different cities throughout the country, which serve as district sales headquarters and as distributing depots for plows, cultivators and repair parts, built to serve quickly and obviate delays in receiving goods from the factory. The building is of reinforced concrete faced with brick of a reddish buff color and trimmed with light cream colored terra cotta. Loads up to 300 lbs. per square foot are carried.

Garage, Jordan, Marsh & Co., Boston, Mass.

MESSRS. MONKS & JOHNSON,
Architects and Engineers

Façade of waterstruck brick, with limestone trimmings; floors and walls of reinforced concrete. This building is unique in that second and third floors are hung from the roof girders, leaving the first floor absolutely free of all columns. Sprinkler system, steam heated.

BUILDING OF ARTHUR COLTON CO., DETROIT, MICH.
MESSRS. MILDNER & EISEN, *ARCHITECTS*

The Youth's Companion Building, Commonwealth Ave., Boston, Mass.

MESSRS. DENSMORE & LECLEAR,
Architects and Engineers

This is a reinforced concrete structure of the S-M-I flat slab system.

The exterior is constructed with reinforced concrete columns and concrete spandrel beams, the curtain walls being of waterstruck brick.

The building is designed to give the maximum amount of unbroken floor area, the fire exit stairs and freight elevators being in towers on the rear, while the main stairs and passenger elevators are in one of the corner towers on the front.

The second floor is used as the press room floor, and this floor is designed for a live load of 300 lbs. per square foot, and no troubles from vibration have been experienced.

The first floor has the heavy folding machines, but above the second floor the machinery loads are normal.

All of the window openings in the building are filled with solidsteelsash, the ventilating sections, for the most part, being of the counterbalanced type.

Three freight elevators and two passenger elevators are provided for, serving all floors.

This building is fully equipped with sprinklers, with the sprinkler tank inclosed in the roof house at the rear of the building.

The entire building is heated with hot water.

DETAIL OF ENTRANCE

BUILDING OF WM. WRIGLEY, JR., CO., LTD., TORONTO, ONT.
MESSRS. PRACK & PERRINE. *ARCHITECTS AND ENGINEERS*

The Blackstone Cigar Building, Boston, Mass.

MESSRS. DENSMORE & LECLEAR,
Architects and Engineers

The Blackstone Cigar Building is of reinforced concrete throughout, of the beam and girder type, but is interesting from the standpoint that it was built on the so-called "Unit System," that is, all the columns, beams and girders were cast up on the ground and placed in the building similar to the method used in placing structural steel.

This is one of the very few buildings in this vicinity erected along these lines.

The roof over the sorting room in one wing of the building has a clear span of 48 ft. supported on reinforced concrete girders.

INDUSTRIAL INFORMATION

The Effects of Vibration in Structures

A pamphlet of unusual interest to architects engaged in the design of manufacturing buildings has been issued by the Aberthaw Construction Company of Boston, Mass., in the form of a preliminary report of the effects of vibration in structures.

The purpose of issuing this preliminary paper is stated to be, to encourage further co-operation, while experiments and study are continued.

For a final report is reserved a thorough analysis and weighing of evidence, together with the theoretical discussion, and the experimental records which are vitally essential to a comprehensive understanding of the subject.

Copies of this report will be sent upon request to those desiring it.

The American System of Heat Control

E. F. Houghton & Company, Third, American and Somerset Streets, Philadelphia, Pa., have issued Catalog K, illustrating and describing in detail the American System of Heat Control and the Thermostat which, it is claimed, accomplishes the results promised.

It appears that E. F. Houghton & Company was established in 1865, and has been in continual existence since that time. The business has passed through various stages of development from one of manufacturing petroleum lubricants exclusively to one producing various products and appliances designed to increase efficiency and reduce waste in the operation of manufacturing and power plants. The first step was taken in the marketing of heating appliances in 1895, when the company placed upon the market the Marck Steam Trap. From that beginning has grown the present heating and engineering department, which handles the manufacture and sale of both float and thermostatic steam traps, the Houghton Therm System of Steam Circulation, the American System of Heat Control, and sundry other apparatuses pertaining to these systems.

The need for heat control in practically every building where there is need for heat is now admitted, and an automatic system seems to be a logical meeting of these requirements in the present day and age. It is claimed that the American system provides this result in the highest degree. The catalog tells in detail how it is done. Copy will be sent to architects or engineers upon request.

Porcelain Enamel Iron Sanitary Ware

Humphryes Manufacturing Company, Mansfield, O., with branch offices in New York, Chicago and San Francisco, has issued catalog E, which describes and illustrates the line of Porcelain Enamel Iron Sanitary ware and brass goods used in the sanitary equipment of buildings.

The line comprises bath tubs, lavatories, manicure stands, drinking fountains, sinks, laundry trays, water closet tanks and combinations, urinals and tanks, and miscellaneous products.

In connection with these fixtures are brass goods necessary for their complete installation. The designs shown are attractive in appearance, and much data concerning dimensions, together with list prices, is given, making it possible to determine space required for various installations. Copy of this catalog will be sent to architects upon request.

DOORWAY—HOUSE OF W. L. GARRISON, JR., ESQ., WEST NEWTON, MASS.

MR. R. CLIPSTON STURGIS, *ARCHITECT*

MR. WM. B. COFFIN, *ASSOCIATE*

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, FEBRUARY 28, 1917 NUMBER 2149

HOUSE OF THOMAS A. McGINLEY, SEWICKLEY, PA.
MESSRS. JANSSEN & ABBOTT, *ARCHITECTS*

THIRTY-SECOND ANNUAL EXHIBITION ARCHITECTURAL LEAGUE OF NEW YORK

REMOVING the "dead wood and lumber of tradition" is not at all times easy. Nor is the task ever a pleasant one to those engaged in it. There is a certain mental laziness as well as physical dread of unusual effort to be found in the average man. It is always far easier to move along in well defined channels, giving no thought to improvement of existing conditions, than it is to undertake the accomplishment of improvement by inaugurating changes.

If conditions analogous to these exist in various other artistic societies, and we are inclined to believe they do, they certainly are not apparent in the activities of architectural organizations that each year devote much time and expend considerable energy in the collection and presentation of architectural exhibits. Even less than ten years has served to produce an entirely different aspect in architectural exhibitions. Continued study of exhibitions of architectural work has

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tended to prove to thoughtful members of the profession that the greatest value in these annual displays lies chiefly in their educational influence, not to the man in the profession of architecture, but to that growing body of people whose artistic inclinations lead them to regard a good work of architecture with more interest than ever before. The professional man has learned the theory of his work during his college course and those halcyon days when he made the "grande tour" of Europe. He will therefore not expect to find much that is new to him on the walls of an architectural exhibition.

So then, an architectural exhibition to maintain its artistic and educational aspect, must now be presented in a manner that will afford an easy and an attractive method of instructing the layman.

Each year, during the past ten, this feature of exhibitions has been more and more pronounced, and the culmination is to be found in the present one of the Architectural League of New York.

One of the first sure indications of the artistic interest that could attach to an exhibition of works of architecture was in connection with a display held in Philadelphia under the auspices of the T Square Club and the Philadelphia Chapter of the American Institute of Architects, in the galleries of the Pennsylvania Academy of the Fine-Arts. On that occasion renderings were hung "cheek by jowl" with paintings that formed part of the Fine-Arts exhibitions, and the architectural plaster models alongside of notable work by American sculptors. Those in charge of succeeding exhibitions all over the country at once recognized the artistic possibilities latent in a commingling of architecture and allied arts, and followed an example so satisfactorily proven.

BUNGALOW FOR J. H. LAPHAM, ESQ., NEW CANAAN, CONN.
MR. WILLIAM B. TABBY, *ARCHITECT*
THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

EPISCOPAL CATHEDRAL, MANILA, P. I.
MR. R. CLIPSTON STURGIS, *ARCHITECT*

SWIMMING POOL, ESTATE OF A. B. COXE, ESQ., PAOLI, PA.
MR. CHARLES W. LEAVITT, *LANDSCAPE ENGINEER*
THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

MODEL FOR A HOUSE AT PALM BEACH, FLORIDA
MR. F. BURRALL HOFFMAN, *ARCHITECT*
THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

BANK OF HAMILTON, WINNIPEG, MANITOBA
MESSRS. H. C. INGALLS AND F. B. HOFFMAN, JR., *ARCHITECTS*
THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

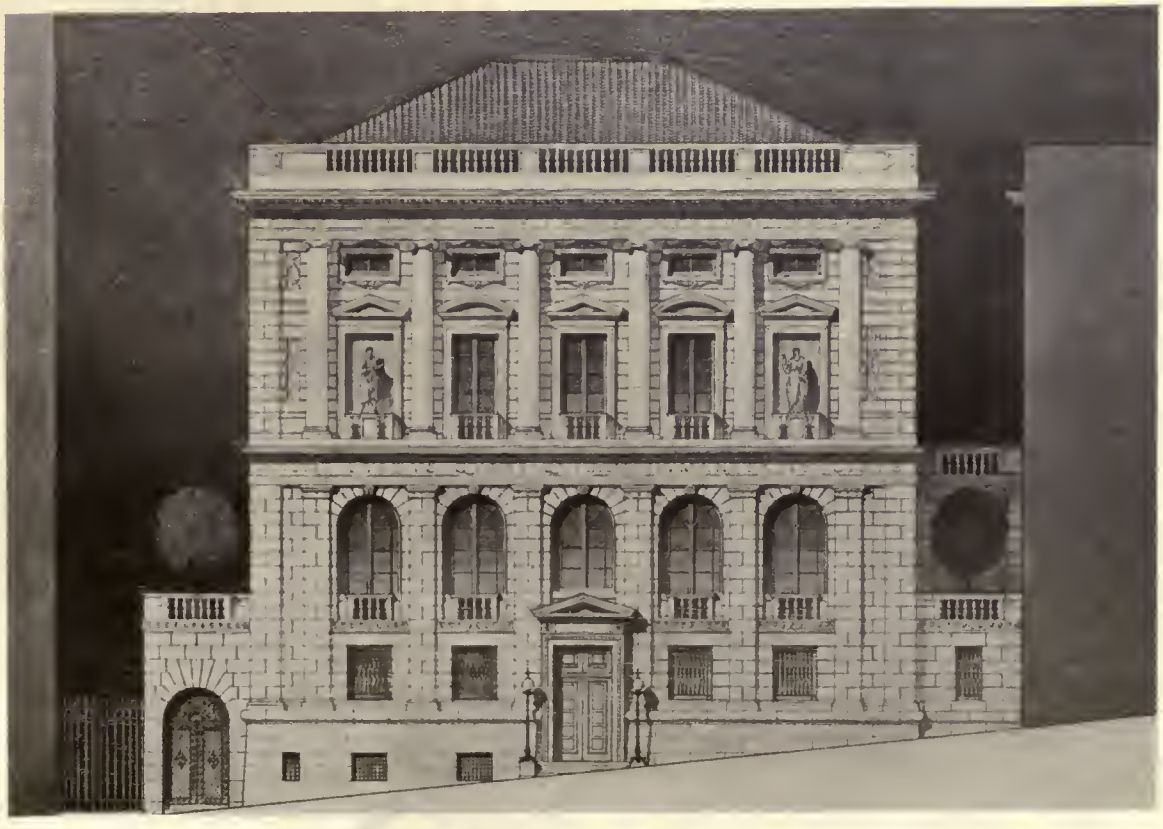
The present exhibition of the Architectural League of New York is undoubtedly the most beautiful grouping of a display of architecture and the allied arts ever accomplished. The basic idea in the treatment of the Vanderbilt Galleries is of a formal garden. The result of the decorative treatment and the intermingling of the several arts is that there are no

BOY AND TURTLE
MR. HENRI CRENIER, *SCULPTOR*
THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

neglected places, no dark corners or "morgues," as they are called, where works of lesser merit are often grouped together. Like a well painted picture, there is no apparent "spottiness," but an even, well executed area of artistically good effort.

All exhibitions present to the thoughtful observer some composite idea, some significant thing that shows the trend of art, as expressed by the temperamental qualities of the artists, and the general tendencies toward specific things.

CAVALRY GROUP—GRANT MONUMENT, WASHINGTON, D. C.
MR. HENRY M. SHRADY, *SCULPTOR*



AMERICAN ACADEMY OF ARTS AND LETTERS, WEST 155TH STREET, NEW YORK CITY
MESSRS. McKIM, MEAD & WHITE, *ARCHITECTS*
THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

WEST ENTRANCE COURT

HOUSE OF GORDON K. BELL, ESQ., KATONAH, N. Y.

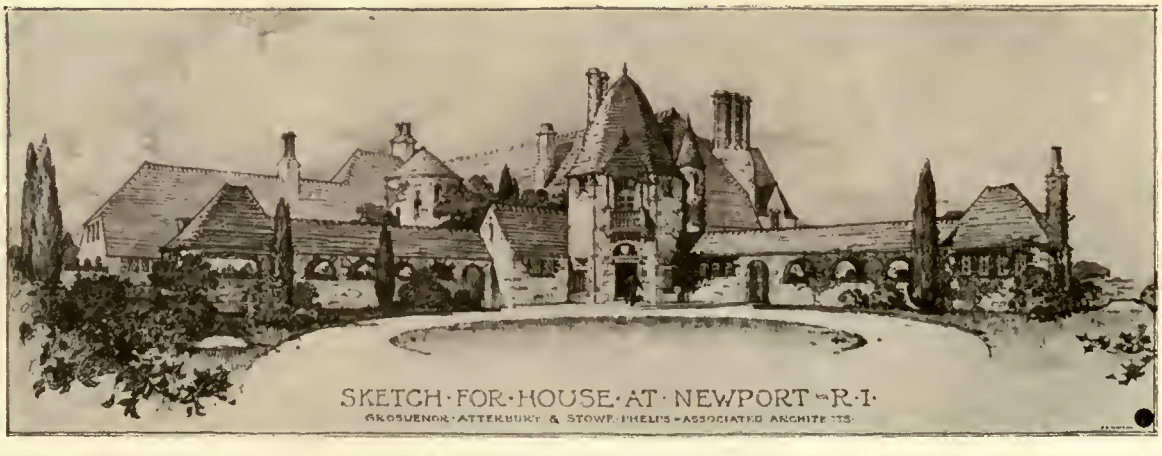
MESSRS. ARMSTRONG & DE GELLEKE, *ARCHITECTS*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

One year a leaning toward a most marked originality of treatment has been apparent; another, the artistic development of our domestic architecture has been emphatically shown. Again, there have been specific examples of special types of buildings that have been so epoch marking as to greatly influence later development of the type.

This year it would seem that while there is not apparent any startling inno-

(*Continued on page* 147)



THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

PRIZE WINNING DESIGN

MUNICIPAL BUILDING, PLAINFIELD, N. J.

MR. LAURENCE F. PECK AND MR. LAWRENCE BOTTOMLEY, *ASSOCIATED ARCHITECTS*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

1462

"MANHATTAN"

"BROOKLYN"

SCULPTURED FIGURES FOR BROOKLYN TERMINAL, MANHATTAN BRIDGE, NEW YORK

MR. DANIEL CHESTER FRENCH, *SCULPTOR*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

SOUTH ELEVATION

HOUSE OF L. N. LAPHAM, ESQ., NEW CANAAN, CONN.

MR. WILLIAM B. TUBBY, *ARCHITECT*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

ENTRANCE AND MAIN HALL

HOUSE OF L. N. LAPHAM, ESQ., NEW CANAAN, CONN.

MR. WILLIAM B. TUBBY, *ARCHITECT*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

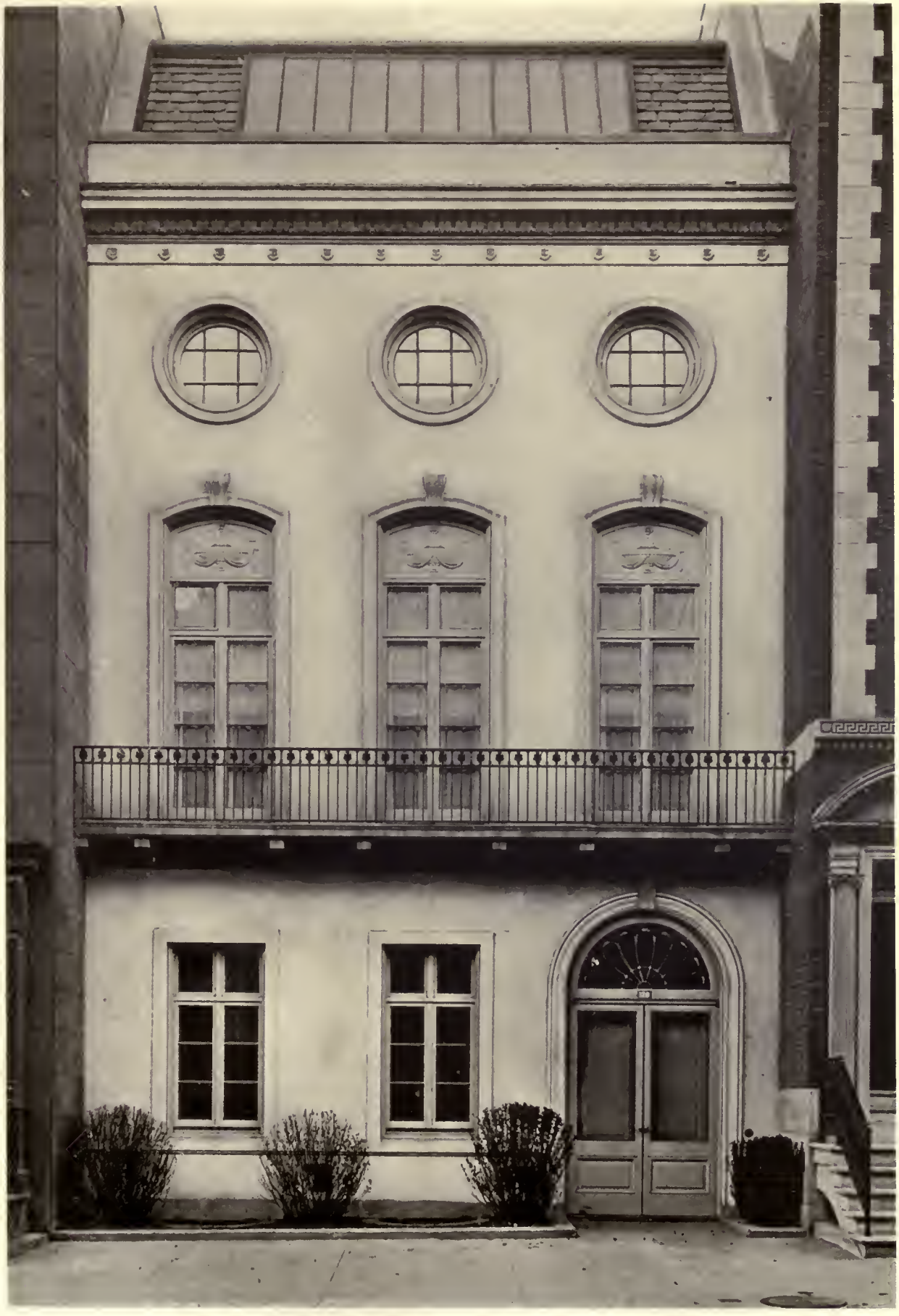
THE VOLUNTEER

PROTEST AGAINST SLAVERY

BAS RELIEFS, GERMANTOWN MONUMENT

MR. ALBERT JAEGERS, *SCULPTOR*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK



OFFICE OF MESSRS. DELANO & ALDRICH, NEW YORK

MESSRS. DELANO & ALDRICH, *ARCHITECTS*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

GARAGE

GARDENER'S COTTAGE

ESTATE OF IRVING BROKAW, ESQ., MILL NECK, L. I., N. Y.

MR. H. T. LINDEBERG, *ARCHITECT*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

THE SOUTH TOWER

HOUSE OF GORDON K. BELL, ESQ., KATONAH, N. Y.

MESSRS. ARMSTRONG & DE GELLEKE, *ARCHITECTS*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

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VOL. CXI FEBRUARY 28, 1917 No. 2149

"SETBACK" LINES

IT is gratifying to be able to record that the attention of the Board of Estimate's Committee on City Plan has been called to the advisability of establishing "setback lines" on all new streets and in connection with the improvement of undeveloped suburban residence sections. A "setback line," according to a report recently submitted to the Board of Estimate by its secretary, Robert H. Whitten, is to be construed as a sort of secondary building line, drawn parallel to the inner edge of the prescribed sidewalk limit and about fifteen or twenty feet behind it. It is proposed to regard the setback line practically as the building line and to prohibit all construction between the actual building line and the setback line, so that by this means all new streets would be lined with a fifteen or twenty foot open strip, in all probability planted, providing plentiful light and air, both probably sufficient for the street regardless of the use to which it may ultimately be put, and providing ample circulation and traffic facilities if the street should finally become an artery of business lined with skyscrapers. Three reasons are especially adduced in Mr. Whitten's report in favor of the establishment of the setback line:

First—health, comfort and amenity. In a private residence section a uniform setback from the street line increases the attractiveness of the section and adds to the health and comfort of the inhabitants. It improves light and air conditions; makes possible the front lawn with trees and shade; removes the dwelling further from the noise, fumes and dust of the street. Where residences are uniformly set back from the street without the establishment of a legally binding setback line each owner is at the mercy of his neighbors. A single owner by disregarding the setback line may ruin properties left and right of him for an entire block.

Second—economy of initial development. Purely local residence streets having a setback line can be permitted a narrower width than could otherwise be allowed. This reduces the expense of developing the land, not only by the actual economy of land area, but more markedly by the decreased outlay for paving. With a 10-foot setback a standard 60-foot street might be reduced to 40 feet. This might be adequate for streets under 800 feet in length if developed with single-family houses. If later the single-family houses are replaced by three or four-story apartments the street could easily be widened to 60 feet to meet the increased traffic requirements incident to the more intensive housing.

Third—economy of ultimate development. The existence of the setback line will permit the economical widening of traffic arteries whenever traffic needs require. It makes possible a measure of adaptability and elasticity in street design that is of decided importance in view of the almost fabulous expense of widening a street once laid out and improved.

The setback line will certainly assure wider streets in future, and by a practical method involving a minimum inconvenience with a concomitant maximum of health and utility. Many an ordinary residence street, its houses set back the depth of a front lawn to avoid the dust and fumes and noise of traffic, is destined

ultimately to serve as a business thoroughfare. When this time comes values are bound to have risen in such measure that the widening of the street would involve a prohibitive expenditure. If the setback line formed part of the original plan of this street, the additional width required at such future time will have been provided for and the space between building and setback lines may automatically be absorbed by the street itself. The owners of the property involved would profit in either case.

Bitter experience in city planning has demonstrated that a street once established is one of the most permanent and unchangeable features of the city structure. Buildings have come and gone, but the street lines of lower Manhattan have retained most of the original idiosyncrasies that recall cow-paths and farmers' lanes; this, too, in spite of the fact that the burden of service imposed upon them differs greatly in character and magnitude from any that could have been contemplated at the time these streets were opened. This points to the desirability of introducing adaptability and elasticity in street design. The setback line is a means of assuring streets of such flexibility, which in the nature of things as related to city planning is one of the most anxiously hoped for but most rarely obtained characteristics of a city scheme, despite the fact that lack of it has often made cities hideous and unsanitary and inconvenient, because street lines prevented them from growing naturally out of their civic swaddling clothes.

TENEMENT HOUSE COMMITTEE LAUNCHES CAMPAIGN TO ELIMINATE WOODEN FENCE MENACE

RIDDING New York of the old, unsightly, fire-inviting, rubbish accumulating wooden fence is the latest specific topic added to the program of tenement reform. Convinced that the long, dreary rows of hideous high-board fences, common to every tenement section in New York, must be eliminated in the interest of New York's tenement population, the Tenement House Committee of the Charity Organization Society has set out on an energetic campaign to boost metal fences. It is hoped that every owner, builder and architect in New York City will be reached in an effort to persuade them to join in the campaign to help rid the city of the wooden fence menace.

The appeal to tenement builders to use metal fences is being made on a purely business basis. A little four-page circular has been prepared by the Committee to demonstrate to builders and owners that the use of metal fence will not merely benefit the community, and tenement dwellers in particular, by adding to the light, allowing the air to circulate in the block, eliminating the fire hazards and making backyards more attractive for children to play in, but that it is a profitable investment of the first order. The circular quotes current prices of iron and wire fence suitable for tenement yards, and shows that these can be erected for but little more than the old board fence. When the metal fence is once erected the cost of upkeep, the Tenement House Committee's pamphlet points out, is negligible in comparison with board fence, and it adds enough to the value of the property to more than compensate for the difference in initial cost.

"We are not trying to sell fence," reads the circular. "We are a citizens' committee interested in bettering living conditions among working people."

The movement appears to be one that might profitably be imitated in other cities where conditions are little, if any, better than in New York. While the removal of wooden fences is what might be termed an accomplishment of minor importance, it is necessary before other steps can be taken and for that reason the efforts being put forth by the Tenement House Committee deserve universal support.

ARCHITECTURAL LEAGUE EXHIBITION

(*From page* 144)

vations in design, there is undoubtedly a very highly developed tendency toward artistic refinements.

That architects are proving by their work that they are rightfully classed as artists is amply shown by this exhibition. Both the inexpensive country house and the lordly dwelling of manorial type show the same thoughtful expression of good art.

That these tendencies will affect the arts allied to architecture is obvious. To-day the craftsman must need give the best that is in him if he hopes to place his work in buildings that proclaim the very last word in good designing and efficient planning.

The Medals of Honor for 1917 were awarded as follows:

Architecture: John Russell Pope, for the Temple of the Scottish Rite, Washington, D. C.

SCULPTORED GROUP, SOUTH PROW, "THE ISLAND"

ESTATE OF JAMES DEERING, MIAMI, FLA.

MR. A. STIRLING CALDER, *SCULPTOR*

THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

Painting: Maxfield Parrish, for decorations in Curtis Building, Philadelphia.

Sculpture: H. A. MacNeil, for general excellence.

The collaborative prize of $300 for the best work by an architect, painter and sculptor was divided equally among the three groups of entrants for this prize.

The Avery prize was not awarded this year.

DECORATIVE PANEL, CITY AND COUNTY BUILDING, PITTSBURGH, PA.
MR. CHARLES KECK, *SCULPTOR*
MR. EDWARD B. LEE AND MESSRS. PALMER, HORNBOSTEL & JONES, *ASSOCIATED ARCHITECTS*
THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

ADVOCATING A LICENSE LAW FOR PENNSYLVANIA ARCHITECTS

By HOWARD C. FRANK, *Architect, Pittsburgh, Pa.*

IT is a remarkable fact that the State of Pennsylvania, which, in respect to legislation calculated to protect its citizens from the practices of untrained and unqualified physicians, dentists, lawyers and even plumbers, is yet without a law regulating the practice of architecture.

By writing upon their statute books, and enforcing, such regulations, ten States have long since recognized the desirability of—not to say necessity for—legislation to this end. Several others of the States have recently taken the necessary initial action or launched campaigns of agitation favoring such action by their legislatures. Yet Pennsylvania, for all its paternalism, evidenced by the many wise and proper acts now in force, looking to the public health, safety and comfort, seems surprisingly indifferent to these factors as they relate to the design and construction of its buildings.

It is true that the State and some of our municipalities have written laws and codes regulating building construction which, presumably, throw all the safeguards necessary about the public, but it is also true that these laws accomplish their purpose about as effectively as would one providing a Bureau of Health, presided over by a trained nurse, to pass upon the efficacy of physicians' prescriptions and issue permits for cures premised upon such prescriptions!

Any Tom, Dick or Harry with sufficient gall to bring him to the notice of the public or any part of it, may, regardless of a complete lack of training, experience and skill, presume to practice architecture in this State on a parity with the most learned and able men in the profession. Even journeyman craftsmen, in constantly increasing numbers, "draw plans and specifications" for surprisingly important work in odd hours off their regular employment, with certain disastrous results, æsthetically, and just as real (though concealed) potential disaster, structurally. And it is not by any means a remote possibility that occasionally one of these tyros who, yesterday, was a reasonably competent plumber's helper, inspired and flushed by a few "successes" attending his ventures into the unknown, rises this morning a full-blown architect (though perhaps unable to pronounce the word).

It can scarcely be argued successfully that the public should discriminate when employing architects, for, to again revert to the medical parallel, there can be no doubt that in the absence of a medical

license law, many hospital orderlies would be practicing M.D.'s and get away with it, and that if the medical and like license laws mean (and say at least by indirection) anything, they mean (and say) that the public should not be obliged to discriminate save among practitioners of demonstrated competence.

The public, to which "an architect is an architect"—just as, under different conditions, an orderly might be a doctor—has undoubtedly a right to the State's protection. It has the same right to know that the architects it employs are not paperhangers as it has to know that the canned beans it buys are not cherry seeds. This latter right is concretely recognized—why not the former?

Contractors, whose contracts depend in large measure upon close figuring under a competitive system, and whose profits from such contracts depend wholly or in large part upon the practicability, clarity and coherence of architects' drawings and specifications, and whose reputations, to a degree at least, depend upon the finished appearance of their work, surely are entitled to all the protection the State is able to afford them by insuring that at least the instruments placed in their hands by owners shall be the best available for the purpose and that any losses, in a business hazardous at best, shall be traceable to themselves alone, instead of (as now too frequently occurs) to the owners through their agents, the architects.

Journeyman craftsmen, in the building trades, whose continuous and profitable employment is inseparably linked up with the financial successes of their employers, the contractors, are entitled to feel and know that the State has not left undone any act which, in its absence, constitutes a greater or less menace to their prosperity.

The architects, themselves, have a right to be taken out of competition with an adulterated product sailing under a false label, having in mind not "competition" in the restricted sense in which it is commonly used, but competition which is selective on the part of the public and of which the individuals are not conscious. They have a right to the State's protection of their investments of time and thought and study in necessary preparation for their professional work; to relief from the odium necessarily cast upon the entire profession by the delinquencies and incompetencies of professional masqueraders; and to know that the ethical standards of the profession rest with high class men.

Passing over the obvious fact that an architects' license law is desirable and necessary in this State, when and by whom should the work looking to its passage be initiated?

As to the time—there is none like the present—the legislature is now in session.

As to agencies—the people who would benefit by the law, namely, the lay public, the contractors, the craftsmen and the architects.

The public for purposes of practical legislation is clearly impotent, being afflicted with a peculiar lethargy which has its result in complete lack of cohesive organization and is for this reason not available.

The builders, the craftsmen and the architects have effected various organizations of themselves which, in such behalf, might well be mobilized. These organizations are in their very nature effective and upon occasion formidable, and there can be no reasonable doubt of the results which would attend a concerted effort by them within the confines of the political arena.

An accomplishment of this sort is not fundamentally selfish, as some legislation has been with which we are more or less familiar, so that there can be no logical opposition on the part of any class except the relatively small one at which the law would obviously be aimed, and opposition from that source would be entitled to precisely the same consideration as would be accorded objections to legislation against any other sort of adulteration or misrepresentation—None!

DECORATIVE PANEL, CITY AND COUNTY BUILDING, PITTSBURGH, PA.
MR. CHARLES KECK, *SCULPTOR*
MR. EDWARD B. LEE AND MESSRS. PALMER, HORNBOSTEL & JONES, *ASSOCIATED ARCHITECTS*
THIRTY-SECOND ANNUAL EXHIBITION, ARCHITECTURAL LEAGUE OF NEW YORK

Swimming Pool on Top Floor of Old Club Building

Building a large swimming pool (with a load of about 400 tons of water) on top of an old building was an interesting part of the enlargement of the eight-story Union League Club Building in Chicago. This work was described by Frank E. Brown in a paper read recently before the Western Society of Engineers. The building is about 100x149 ft. A swimming pool was desired, but there was no available space in the basement; therefore, three stories were added to the rear part of the building (100x49 ft.) to accommodate the pool and gymnasium.

The swimming pool is 30x60 ft., with a depth of 4 to 8½ ft. The old cast-iron columns could not carry much additional load, and replacing them with new steel columns was out of the question, especially as the old foundations were inadequate. They were strengthened, however, to carry the ninth floor. The tenth floor (swimming pool) and eleventh floor are carried independently by new steel columns located so as to clear the old foundations and not obstruct important rooms. This arrangement involved difficult work in cutting and reframing the structural work in the building.

The sides of the pool are formed by plate-girders about 11 ft. deep, and the bottom has 18-in. I-beams spaced 13 to 24 in. c. to c., with a ⅜-in. deck plate riveted to their top flanges and to continuous angles on the sides of the girders. Steel trusses in the tenth story support the upper walls, some of these trusses being cantilevered 7 to 10 ft. from the new columns to the walls.

The waterproofing of the swimming pool was a special problem. The original intention was to make the steel tank water-tight by calking and riveting, and to line this with membrane waterproofing, concrete and tile. Instead, a lead lining was used. The rivet heads on the girders were flattened to ½ in., and a 1½-in. coat of cement was put on with the cement gun. On this was applied the sheet lead, 4 lb. per sq. ft. (about 1/16 in. thick), tacked at the joints to wood strips set in the cement. The joints were then soldered.

On the lead was placed membrane waterproofing, then 4-in. cement (with the cement gun) and finally the lining of ¼-in. tile set in cement mortar. The bottom was treated in the same way, but with less concrete, the total thickness of the lining being 7 in. for the sides and 4 in. for the bottom.

The water, after being treated with alum as a coagulant, passes through a quartz filter, a heater and then a violet-ray machine. The water is kept in continuous circulation and at uniform temperature. The tank is to be emptied and cleaned every two months.—*Engineering News.*

Michigan Chapter A. I. A.

There was an interesting special meeting of the Michigan Chapter held in Detroit on January 21. Mr. Lawrence Veiller, secretary of the National Hous-

ing Commission, made an address, taking for his subject "The Essentials of Correct Housing."

Officers elected by the Chapter for the coming year are: President, Marcus R. Burrowes; vice-president, Prof. Emil Lorch, Ann Arbor; secretary, Dalton R. von Schneider; treasurer, Charles Kotting; director, James B. Nettleton.

PERSONAL

Mr. T. Robert Wieger, architect, announces his return to Denver, Col., to resume the practice of his profession, with offices, 620 Empire Building.

Mr. A. E. Doyle, architect, formerly of the firm of Messrs. Doyle & Patterson, Portland, Ore., has opened an office for the practice of his profession in the Worcester Building, that city.

Mr. Louis Miller, architect, has opened an office for the practice of his profession at 3 West Federal Street, Youngstown, Ohio, and would be pleased to receive manufacturers' samples and catalogs.

Mr. A. Herbert Massey, civil engineer and architect, of Berkley, Va., has opened an office for the practice of his profession in the McKevitt Building, Norfolk, where a firm has been organized as the Bonney-Massey Company.

Messrs. Mellor & Meigs, architects, 200 South Juniper Street, Philadelphia, Pa., announce that they have admitted to partnership Mr. George Howe, and will continue the practice of architecture under the firm name of Mellor, Meigs & Howe.

It is announced that the firm of Blackwell & Baker, architects, Seattle, Wash., has been dissolved. Mr. J. E. Blackwell will continue the practice of his profession in the old offices, 823 Northern Bank building. Mr. F. L. Baker has opened new offices in the Hinkley Block, Seattle, and will be glad to receive manufacturers' circulars and catalogs.

Charles C. Haight Dead

Charles Coolidge Haight, architect, died at his home at Garrison-on-Hudson of February 6. He was born in New York City, March 17, 1841, the son of the Rev. Benjamin I. Haight, assistant rector of Trinity Church. Mr. Haight was graduated from Columbia University in 1861 and a year later entered the Civil War. He was wounded at the battle of the Wilderness.

Besides many buildings in this city, Haight designed for Yale University, Vanderbilt and Phelps halls, the university library, and the Mason, Sloane and Osborn laboratories, as well as dormitories for the Sheffield Scientific School. He also designed the Keney memorial tower at Hartford, Conn.

War Honors to British Architects

The Architects and Builders Journal of London publishes a list of names of architects and architectural students who have received military decorations for valor.

We find that one student, Capt. E. N. Franklin Bell, killed in action in France, received the highest distinction, that of the Victoria Cross.

A further list of architects who have fallen, which list it is feared is incomplete, records seventy-two names, thirty-three of which are members of the R. I. B. A.

To Regulate Building in New York State Cities

A bill pending in the legislature of the State of New York will, if passed, confer on all cities the power to regulate and limit the height and bulk of buildings and determine districts for specific purposes, similar to the provisions of the recent enactment for New York City.

Scranton, Pa., Architects Exhibit

The Scranton, Pa., Society of Architects has just concluded a successful exhibition, which well served its announced purpose, which was the development of a local interest in architecture and the allied arts.

This exhibition was free to the public.

INDUSTRIAL INFORMATION

Concrete in Cold Weather

UNDER the above caption, the Portland Cement Association, 111 West Washington Street, Chicago, Ill., has issued a timely and instructive pamphlet of sixteen pages. In this are considered methods by which concrete construction work can be prosecuted during winter months and the various effects on the materials to which these methods are applied. Authoritative information on this subject has led to a condition where concrete work is now carried on almost regardless of season or temperature.

In a summary it is stated that the following points must be borne in mind in order to insure satisfactory work. First: That all concrete which freezes before early hardening has been completed may not be permanently injured, if, after thawing, it is not again exposed to freezing until hardened. Protecting the concrete against the possibility of freezing is, however, the safest plan.

Second: It is not necessary, however, to so mix, place and protect the concrete that early hardening will be complete before the work is exposed to freezing temperatures.

Third: When this is done, sand and pebbles or broken stone must be free from frost or lumps of frozen materials.

Fourth: As cement forms but a relatively small bulk of the materials in any batch of concrete, it need not be heated.

Fifth: Mixing water should always be heated.

Sixth: Although adding common salt to mixing water will prevent freezing of concrete that has not hardened, there is a limit to the quantity of salt which may be added if the final strength of the concrete is not to be affected. Salt simply lowers the freezing point of the mixing water. It does not supply what is most needed—heat and warmth. It delays instead of hastening the hardening of the concrete.

Seventh: The temperature of concrete when placed should be from 75 to 80 degrees.

Eighth: Some sands and certain varieties of pebbles and broken stones are injured by too much heat. A temperature not exceeding 150 deg. Fahrenheit will generally prove most satisfactory.

Ninth: Metal forms and reinforcing should be warm before placing. Forms can be warmed by turning a jet of steam against them, or by using hot water.

Tenth: Even though materials have been heated and concrete placed immediately after mixing, it should be protected from very low temperatures. This may be done by canvas covering, sheathing, housing-in the work, using hay or straw, or in the case of enclosed structures using small oil or coke-burning stoves.

Eleventh: If concreting is delayed or interrupted, the work should be covered until it is begun again.

Twelfth: In severe cold weather protection should be furnished concrete for at least five days.

Thirteenth: Greatest care should be exercised to prevent removal of forms before concrete has had sufficient time to set. This applies to any season, but is particularly important in the case of work done during cold weather.

Fourteenth: It should be remembered that frozen concrete sometimes very closely resembles concrete that has thoroughly hardened. To make sure it should be tested by pouring hot water on it or turning the flame of a plumber's blow torch or a jet of steam under pressure against the concrete.

Copies of this pamphlet will be furnished upon application.

Eye Comfort Lighting System

The National X-Ray Reflector Company, Chicago, Ill., has recently issued Catalog E. This is divided into five sections as follows: Metal fixtures, Compone fixtures, Luminous fixtures, Curtis lamps, and Cove lighting.

Comfort, adequacy and the highest artistic effects are claimed for the Eye Comfort System of indirect illumination. The various sections of this catalog are intended to cover all ordinary requirements for artificial lighting.

Copy of the catalog may be had by architects upon request.

DINING ROOM MANTEL

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, MARCH 7, 1917 NUMBER 2150

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FIG. 3—TERRACE STEPS AND GARDEN HOUSE, STONYHURST COLLEGE

GARDEN WALLS AND TERRACES*

THERE existed in the original thirteen States, or colonies, at the outbreak of the Revolutionary War, many estates of large acreage and with fine houses. Along the banks of the Hudson, and in nearby Long Island, there were up to as recently as fifty years ago numerous examples of these dignified country houses. Few traces of them remain. The land about them has, in most instances, become sites of more or less important real-estate developments.

But, fortunately, we are becoming more and more an out-of-doors people, and the lure of country life is yearly growing stronger. Men of large means have acquired in many localities vast tracts of land, and, with trained artistic assistance of competent architects, are creating estates that exceed anything ever done in this country, and which will eventually favorably compare in architecture and picturesqueness with the fine old English mansions and broad acres, built during the times of Henry VIII, Elizabeth and James I, or periods known as Tudor, Elizabethan and Jacobean, grouped under the general designation as the English Renaissance.

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FIG. 1—FORECOURT WALL AND GATEWAY, BRECCLES HALL, NORFOLK

Of the features that have made these English mansions famous none are more picturesque than the gardens in which they were set, and the walls and terraces that marked the "close" or actual grounds that surrounded the house. It will be interesting to study examples of some of these gardens with their well-designed walls and terraces and, as far as is possible to do so from photographs, draw inspiration for similar work on our American country estates.

In most of the garden walls, the material of construction was brick, of local manufacture, irregular in size and either originally or through the effects of many years of weathering of splendid texture.

Figure 1 illustrates the forecourt wall and gateway to the gardens surrounding Breccles Hall, in Norfolk. The house was built towards the close of the XVI Century. There are no means of ascertaining if this garden wall was erected at the same time. It was probably of much later erection, but like all these garden walls, follows in its architectural style that of the house.

Its solidness, unusual thickness and buttressed gateway would seem to indicate that it might, when built, have combined the dual purposes of a garden inclosure and a defensive barrier against the marauding bands that infested the country at that time.

Figure 2, a detail of a garden wall at Kirby Hall, in Northamptonshire, built during Henry VIII's time, discloses a more peaceful period than that shown at Breecles Hall.

There are no suggestions of siege or defense in this well-designed wall and gateway. The materials, brick and carved stone are handled in the good architectural manner that marks so many of these garden walls. Probably the niches flanking the main gateway were closed by iron grills, and that an iron gate of equally good design barred the way to trespassers.

Stonyhurst College, built in 1592, is one of the picturesque remains of the XVI Century. Its gardens are famous for their architectural excellence, their planting and the broad terraces that abound there. In Figure 3 may be seen a typical example of the methods pursued in the

FIG. 2—WALL AND GATEWAY, KIRBY HALL, NORTHAMPTONSHIRE

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

FIG. 4—GARDEN SCREEN, STONYHURST COLLEGE

planning of these formal gardens. At the end of the long vista is a garden house, the walk being flanked on one side by a wall, now vineclad so completely as to cover the material, on the other tall shrubs that bank the slope to the terrace on a higher level. The broad stairway leading by steps of low risers to the terrace level, and the solid stone balustrade, indicate the thorough as well as good artistic methods in use in a day when time was the least important factor in construction.

FIG. 5—GARDEN, BURFORD PRIORY, OXFORDSHIRE

FIG. 6—GATE PIERS, WATER EATON MANOR

Figure 4 shows another view in the garden at Stonyhurst. Its beauty of design is too apparent to need description.

Age does not wither, but enhances the beauty of these gardens. In Figure 5 we get a glimpse of a corner of the garden wall at Burford Priory in Oxfordshire, as seen through one of the cloistered arches. This stately old place, at one time a ruin, but now reverentially restored, dates from the Tudor period. The gardens are famous for their beauty and the glimpse that indicates the three or more levels on which it was laid out is one to confirm its reputation.

The gate piers at Water Eaton Manor, also in Oxfordshire, are a relic of a de-

parted beauty. The wooden gate is a mere substitute for the massive iron leaves that undoubtedly hung between these well-proportioned gateposts. The wall of great age shows signs of having been reduced in height but enough remains to prove that at one time this was a dignified entrance to one of England's most formal mansions.

Figure 6 shows another gateway with evidently substitute gates of iron, and where the wall, reduced now almost to nothingness, has through succeeding years crumbled to its present low height. This gate is at Derwent Hall in Derbyshire.

Figure 7 illustrates a Jacobean house and a palladian garden. The view is of a part of the house and wall of Kildwick Hall, in Yorkshire. This house is perhaps the most recent of erection of these here illustrated, its present age being perhaps less than three hundred years. The lions surmounting the gateposts are details of the armorial bearings of the original owners of the house.

FIG. 7—A JACOBEAN HOUSE AND A PALLADIAN GARDEN, KILDWICK HALL, YORKSHIRE

MANTEL IN HALL

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

DETAIL OF ENTRANCE FRONT

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

DETAIL OF ENTRANCE FRONT

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

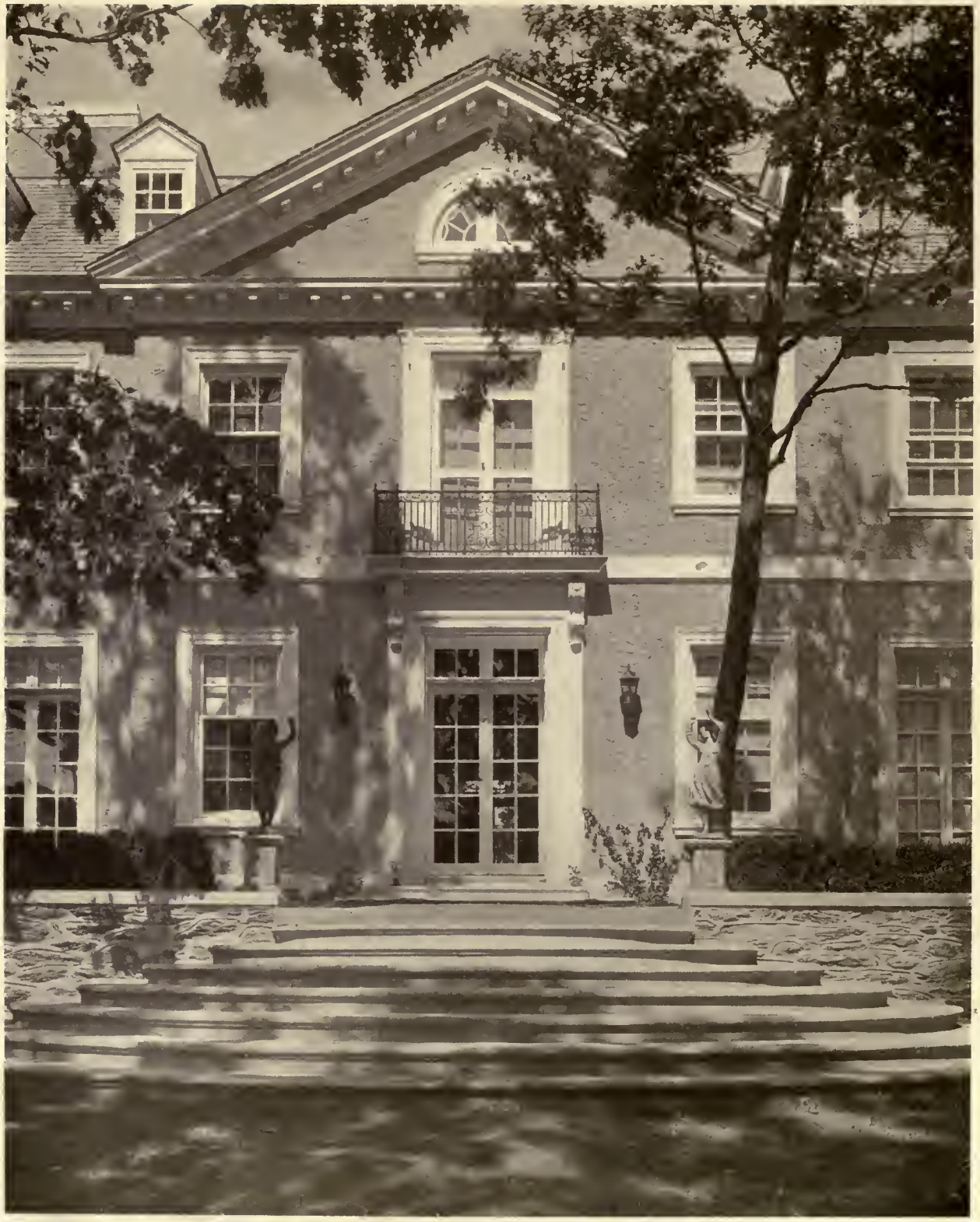
DETAIL OF PRINCIPAL ENTRANCE

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*



DETAIL OF ENTRANCE, TERRACE FRONT

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

THE AMERICAN ARCHITECT

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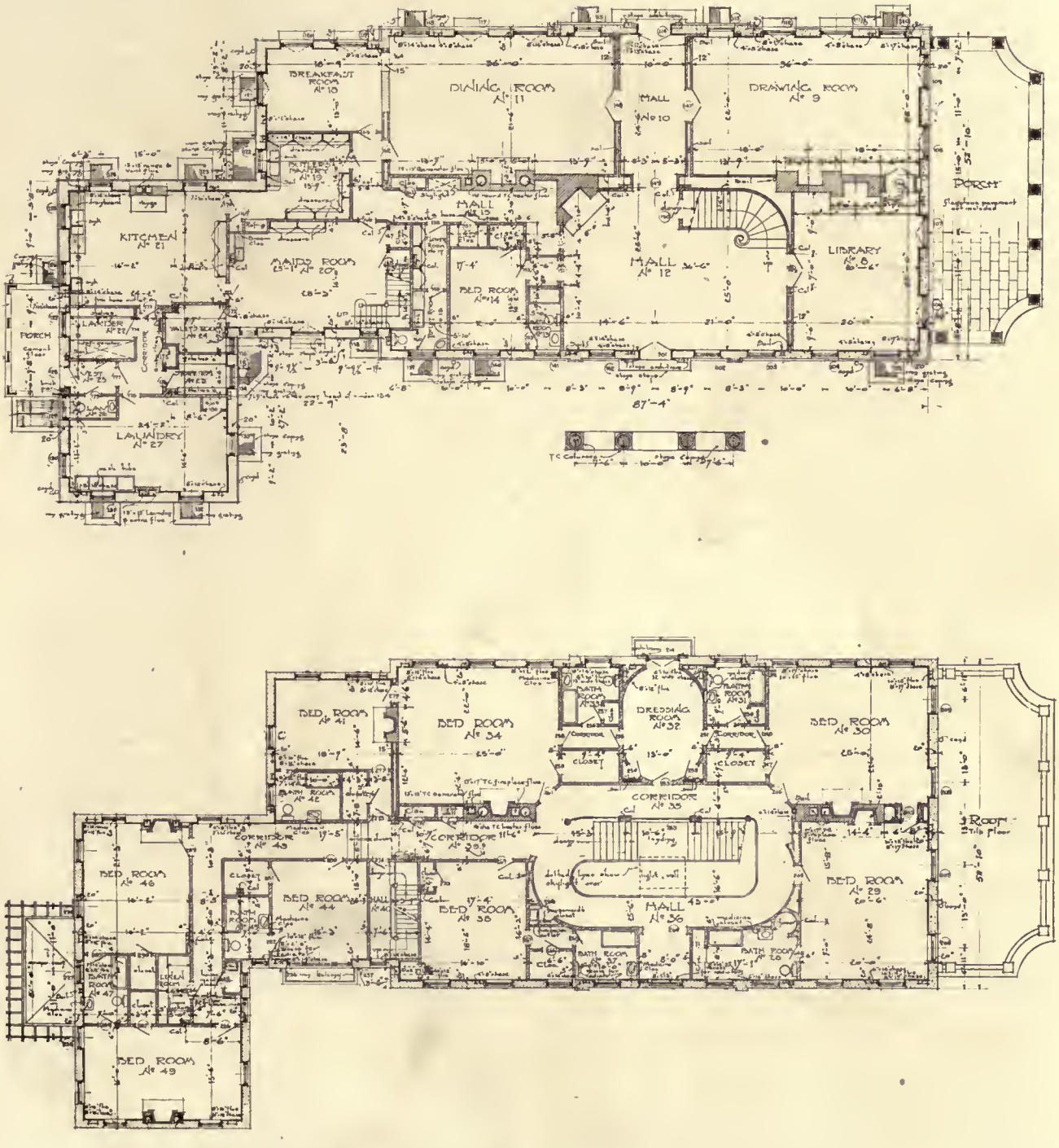

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

THE HALL

HOUSE OF PAUL D. MILLS, ESQ., ST. DAVIDS, PA.

MR. CHARLES BARTON KEEN, *ARCHITECT*

1579

THE HALL

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THE PUBLIC BUILDINGS BILL

ARCHITECTS will seldom find more interesting reading than is contained in the issue of the Congressional Record that reports the debates incident to the consideration of the Public Buildings Bill, that passed the House on January 19 by a vote of 234 to 92 with 108 members not voting. For the benefit of those who have not this document at hand, it may be said that there seems to be an unmistakable feeling of animosity more or less prevalent in Congress toward the profession of architecture, and while this feeling no doubt is based on ignorance of exact conditions, it nevertheless constitutes a very serious menace to the future public buildings of the United States. Instead of anything constructive being done to allay suspicion and foster more cordial relations, there has been during recent months what might almost be termed "a campaign" waged against Congressional methods of treating this subject. That this attack in itself was justified seems probable—although the wisdom of making it may be questioned—but unfortunately it has not always been conducted with sufficient care to determine the absolute accuracy of every statement made before it was issued, as is indicated by the debates in the House already referred to.

No doubt exists regarding the ability of those at present in charge of the policies of our professional organizations to uphold their dignity to the fullest extent, but it would seem necessary to proceed with the greatest care in any effort to place the public building situation before members of Congress. Particularly is it essential that no inaccuracies of statement occur which always provide the desired basis of criticism to opponents, and make it possible to throw doubt and suspicion on the entire argument presented.

THE RIVERSIDE DRIVE CONTROVERSY

THE several public hearings on the Riverside Drive Improvement Scheme recently held have not served as it was hoped they would to satisfactorily clarify the situation. The proposers and objectors are apparently as far apart in their views as ever, and neither appear to be disposed to concede anything that affords a solution to an intricate problem. The distrust that appears to be the mental attitude of citizens where an agreement is sought with a corporation is the result of bitter experience, and no motive, no matter how innocent seems free from the suspicion that behind it lies a trap which will eventually be sprung to the discomfiture of the city and taxpayers, and give the corporation a very great pecuniary advantage.

The retention of ex-Justice Hughes as legal adviser and the proposal of the president of the Board of Aldermen to secure the services of General Goethals to render an expert opinion on the engineering problems involved should, it would seem, give sufficient assurance that the interests of the city will have the most careful consideration, and serve to allay misgivings as to the motives actuating the members of the Board of Estimate. It might be suggested that to appoint as additional members of the consulting board an architect of prominence,

and an equally well qualified landscape architect, would add further assurance that none of the problems involved would be overlooked. Certainly the question of esthetics is one of utmost importance in connection with any proposed improvement of our water front.

The presence of the railway on Manhattan Island has long been a source of irritation, and its attitude toward a final solution of matters involving its permanent occupancy of city thoroughfares has not been one that would quiet this feeling. Nevertheless the time has now arrived when these questions should be taken up and adjusted, and no feeling engendered by former relations with the corporation should be allowed to interfere with a just and proper disposition of the various features involved. The present agitation, if it serves no other purpose, has at least brought the entire subject up for consideration and discussion, and has prevented the possibility of any conclusion that will not safeguard the future welfare of the section of the city directly affected.

BUILDING PERMITS

A MOVEMENT now on foot, which has the sanction of various organizations of architects, has for its object the simplifying of the processes in general use by city departments charged with the duty of issuing building permits.

The subject may well receive the consideration of architects and city departments generally, for but little investigation is necessary to establish the fact that methods long since outgrown by reason of greater building activity, changes in processes and materials, and new conditions generally, are still in vogue. The sooner these are revised or abandoned for methods more nearly meeting present-day requirements, the sooner a source of constant annoyance to every one concerned will be removed. The movement deserves the support of all building interests.

THE HIGH COST OF BUILDING

ONE of the most difficult questions which the architect is now called upon by clients to answer is in regard to the probability of a continuation of present prices of building materials and labor. Projects involving the construction of buildings are being delayed or held in abeyance on every hand by reason of the fact that estimates based upon prices current some months ago are in all cases being exceeded when actual tenders are submitted by builders. The client might naturally inquire of his architect whether there is prospect of a reduction in price within the next few months, and from information received we find that there exists a considerable difference of opinion on this subject. In one instance a state architect has recently advised the holding in abeyance of all construction except that considered absolutely necessary to provide accommodations for increased population in state institutions. In another, we find an architect advising his clients that there is little likelihood of a material reduction in prices for some years to come. We are inclined to agree with the latter view. While, undoubtedly, the cost of construction work is abnormally high in comparison with prices which obtained to within a year of the present time, it seems doubtful whether any reductions which can be reasonably expected within two or three years will compensate for the delay in securing needed buildings of any character, unless it might possibly be the elaborate private residence. In all probability, a final readjustment after the war will result in somewhat lower prices of building materials and labor than those current at this time, but we very much doubt their ever attaining the abnormally low level represented by the cost of construction work during 1915.

INDUSTRIAL HOUSING—PART IV

By LAWRENCE VEILLER

Secretary, National Housing Association, New York City.

HENRY FORD'S EXPERIENCE

Henry Ford's experience with this problem in Detroit is quite illuminating. When he started in, a year or so ago, with his plan to pay all his workmen $5 a day he expressed the belief that all that was necessary to do for the workingman in America was to give him an adequate wage and he would take care of himself and that it was poverty that caused all of the troubles that we are familiar with in our great cities; that men lived in slums because their wages were inadequate, that the workingman took lodgers or boarders into his home because his earnings were inadequate, and that when he received an adequate wage such conditions would entirely change.

Well, he tried it, and he was amazed to find after a few months that his men were living under exactly the same squalid and sordid conditions that they had lived under before they received the $5 a day wage and that most of them had not changed their methods of living in any degree, but were simply either putting away the additional money or spending it on personal indulgences. They were living in the same houses, many of them, still bunking six men to the room, sleeping in the clothes they worked in, not bathing sufficiently, and either banking the extra money or squandering or drinking it up.

Mr. Ford saw a great light. He realized that his earlier views were mistaken and at once put into operation a plan for the investigation and supervision of the conditions under which his men lived. So that to-day he is making his efforts count, and the men who continue to live under the same squalid conditions that they lived under with the old wage lose their jobs. He does not want that kind of man in his plant, and he is right.

This illustrates perfectly the importance of keeping control and of renting rather than selling, in the case of the unskilled worker.

As I have already stated, the situation is quite different in the case of the skilled mechanic, the man who gets $25 a week and up.

CONTROL ESSENTIAL TO SUCCESS

The experience of the English garden suburbs has been quite similar. They, too, were started with the idea of having the workingman own his home, but most of them have come to the realization through bitter experience that they cannot maintain their garden suburbs as such unless they do keep control, and so the co-partnership plan has been evolved. By this the company keeps control, but the tenants are given an interest in the property and are enabled to become owners of it through purchase of shares of stock.

It is not strange that this should be the case, if we stop to think of it. How can we expect to maintain satisfactory conditions if we leave the control of all the intricate details of management to a hundred or a thousand men of all sorts and varying degrees of intelligence and standards of living?

It is just as necessary to have centralized control in an enterprise of this kind as it is in a high-grade apartment house such as we find in our large cities. Few of us would care to live in the best apartment houses of New York City if there were no resident janitor or superintendent on the premises.

Few of us would care to travel on a railroad train if the direction of the engine were left to all the passengers. We need some one person who shall be responsible. As in railroading, so in housing enter-

prises; if we do not have a responsible engineer or manager on the job the directors of the corporation may cease to expect dividends and may expect collisions.

Community Development

Thus far we have considered the problems involved chiefly with regard to the individual house. What about the whole community?

As a rule, an industrial housing enterprise involves not merely the building of a certain number of houses but practically the development of the entire community. This is certainly the case where the plant is located in the country away from centers of population. Here it becomes necessary to develop not only the homes of the workingmen, but the streets, the open spaces, the recreational opportunities, the transportation facilities—in a word, the whole city plan.

It is in enterprises of this kind that the Garden Suburb, which has been developed to such an extraordinary extent in England, becomes a practical possibility for America. Here far-sighted employers of labor have a wonderful opportunity. They can develop their community in such a way that it will not only furnish a healthful and delightful dwelling place for their workers, but will be a real asset to the industry.

John Nolen has pointed out most clearly that while we should not as a rule build houses that will not pay a commercial return—that is, a return of at least 5 per cent net—there are other services which the employer of labor can render his workers and should render them without any danger of pauperizing them or of economic disadvantage. There are all sorts of things that go to the making up of a model community that the industry which dominates the town can well afford to pay for, and which can much better be distributed in the cost of the product made in that town than upon the shoulders of the individual workers who make the product.

The street development, the park system, proper transit facilities, everything that goes to make up what we have in mind when we talk of a "Garden Suburb," can very advantageously be paid for and developed by the industry.

I am convinced that one reason why we have not had the Garden Suburb or Garden City movement developed to a greater degree in this country has been because the employers of labor have not clearly grasped this point, but have attempted to assess upon the individual worker or home owner the entire cost of the community development. The average workingman in America cannot afford to pay for such community development, nor should he be asked to.

Just as the intelligent real estate developer, when he cuts up acreage and farm land into building lots, realizes that it is advantageous to his development to donate certain portions of the land to park space, so the employer of labor needs to realize that it is to the advantage of his industry to develop these features of community service and not to expect such development to come from the individual worker.

Similarly, there are other community services which the industry can very well provide, such as central heating, lighting and fuel. Where the workers' homes are located near the plant, the extension of community services of this kind can be done at comparatively low cost, though ordinarily it would seem that a central heating plant is not an economical proposition for much less than 300 families. This, of course, will vary with varying climatic conditions in different parts of the country.

Shall the Workers Live Near the Plant?

Another question that needs to be determined in developing a community of this kind, and one which is often lost sight of, is whether it is better to live near the industrial plant or some distance away from it.

No hard and fast rule can wisely be laid down. It depends largely upon the lay of the land and the nature of the industry. Speaking generally, it is advantageous to have the worker live near the

industry, so as to save time in getting to and from his work.

Where, however, the industry is of such a character that there is a considerable degree of noxious smoke or odor or gases, or undue noise, the case is different, and the worker then should be housed away from the industry. In such cases a consideration of the prevailing breezes and their relation to the plant should be the dominating factor in deciding upon the location of the workers' dwellings.

This is generally considered in developing the better residential quarters of a town, but, too often, it is thought that the workers can live anywhere.

Gardens

Another question is whether it is better to encourage the individual garden around the house or whether there should be a community open space—what they call "allotment gardens" in Europe.

The determination of this question depends very largely upon the kind of worker that we are planning to house. For the skilled mechanic earning $25 a week and up it is unquestionably wise to encourage the individual garden, both flower and vegetable, around his house.

In the case, however, of the unskilled worker earning but $15 a week, I am clear that far better results, both to him and to the community, will come from the development of allotment gardens and from the community control of all open spaces.

We have already seen that this class of worker cannot be housed in detached dwellings except in rare instances. This means that we shall have no side yards. In my judgment it would be better to have no rear yards, either, for workers of this type, but, instead, to have the community take control of all open spaces at the backs of buildings, treat them as small parks or playgrounds for the use of the people whose houses immediately abut them, and see that they are properly and adequately maintained, providing at the same time either there or in some central location allotment gardens where the worker may raise his own vegetables and such flowers as he may wish.

These are some of the considerations involved in this question of industrial housing.

The whole future of industrial housing seems to me very bright. Employers of labor are looking at the subject in a new light. Business men, too, are coming to realize that a community has no right to invite new industries to settle there, unless adequate provision is made for the housing of the new workers, and that when they do this they are injuring their community rather than helping it.

We stand on the threshold of a new era in the housing of the country's workers.

(The End.)

What Are Acoustics?

If closely questioned upon this point, many architects, if equally frank, might with the same truth make a reply similar to that credited to the eminent Richard M. Hunt of New York, one of the greatest architects America has produced, in the following incident:

It was the custom of Mr. Hunt to make charcoal studies of interior details, full size, and for this purpose had prepared in a room of the New York State Capitol, where he was engaged, a long wall space with a running board from which to work. On this particular morning Mr. Hunt, clad in a long linen duster to protect his clothes from the charcoal, was busily employed upon some details, when by some means entrance was obtained to his room without his knowledge, and the following dialogue ensued:

A Voice—"Is this Mr. Hunt?"

Mr. Hunt, continuing his work without looking around—"Yes, I am Mr. Hunt; what can I do for you?"

The Voice—"Well, Mr. Hunt, what do you know about acoustics?"

Mr. Hunt, still absorbed in his work—"I guess I know as much as anyone, and that's d——d little."

The Voice—"Well, Mr. Hunt, I think you are the man I am looking for. I wish to build a large church, and I am looking for an architect who will acknowledge he knows nothing about acoustics. My name is Henry Ward Beecher."—*Construction.*

Should a Professor of Architecture Be Free to Practise?

In a recent issue it was announced that an appropriation had been made by the Parliament of Sydney, Australia, to establish a Chair of Architecture at the University.

The Architects and Builders Journal of London, commenting editorially on this action by the Government, states:—

"With respect to the grant of £2000 a year for the establishment of a Chair of Architecture in Sydney University, there is much to be said on both sides of the question whether or not the incumbent of such a chair should be required to give up his whole time to the work. On the one hand, it is argued that a leading architect in lucrative practice would naturally be reluctant to abandon it for such fame and fortune as a university chair could offer, that therefore the best men would not be available, and that the professor would, as such, lose some of his efficiency by gradually, but certainly, falling behind the march. On the other hand it is held that either function demands a man's undivided attention, that the best architects are not necessarily the best professors, and that to keep abreast of the movement it is not at all necessary to keep in close touch with actual work; the essential qualification being that, unlike a purely scholastic professor, the professor of architecture shall have been a toiler and moiler, in which case his cunning can never wholly desert him. On the whole; we are disposed to agree with those who claim that the professor should be free to practise; and that, we believe, is a condition prevailing in nearly, if not quite, all appointments of the kind that have been made hitherto—at all events within recent years. It is unnecessary to cite instances, which are numerous and conspicuous in all the professions. A professor of theology who ceased preaching, a law lecturer who did not plead, or a lecturer on surgery who did not operate, might be found here and there, but would be exceptional, and the precedent holds good for the architect, who, if his practice happens to be large, can easily overcome the difficulty by arranging a partnership —which, indeed, in the case of a man prominent enough to be selected for a chair, is likely to be already in existence."

Aphorisms of Art

A contributor to *The Architects and Builders' Journal* of London has been able to compile a number of aphorisms, among which the following have a direct bearing on architecture:

Greek architecture is the flowering of geometry.—EMERSON.

Art is not the bread indeed, but the wine of life.—JEAN PAUL.

Whatever in architectural work is endowed with the expression of death is bad art.—G. F. BODLEY.

Taste is only to be educated by contemplation, not of the tolerably good, but of the truly excellent.—GOETHE.

My definition of a work of art would be . . . a corner of creation seen through a temperament.—EMILE ZOLA.

A true architect is far more likely to be a practical man than a practical man is likely to be an architect.—NORMAN SHAW.

The name of the architect who builds most of the castles in the air is "To-morrow," and "Hope" lays the foundation.—PUNCH.

Beauty in the arts is but a natural or educational prejudice, and inconstant, since it depends only upon the fashion of the time.—FREZIER.

All artistic production involves a large element of lucky accident, of which the true artist alone knows how to avail himself.—COVENTRY PATMORE.

Of course I know that it is better to build a cathedral than to make a boot, but I think it is better actually to make a boot than only to dream about building a cathedral.—ELLEN THORNYCROFT FOWLER (*Concerning Isabel Carnaby*).

When a man understands the art of seeing, he can trace the spirit of an age and the features of a king even in the knocker on a door.—VICTOR HUGO.

Westminster Abbey is a great piece of the middle of the thirteenth century still projecting above the later strata of English life and effort.—W. R. LETHABY (*Mediaeval Art*).

In the elder days of Art
Builders wrought with greatest care
Each minute and unseen part,
For the gods see everywhere.
—LONGFELLOW.

The Romanesque is allegorical of the Old Testament, as the Gothic is of the New. The parallel is exact. Is not the Bible, the inflexible book of Jehovah, the awful code of the Father, well expressed by the stern and penitential Romanesque; and the consoling, tender Gospel by the Gothic, full of effusiveness and invitation, full of humble hope?—J. K. HUYSMANS.

It is just as impossible to create citizens by opening streets—whatever their width—as it is to create an architecture by giving its professors sites and money at discretion. If, then, architects would not wish to be classed, in the next century, among lost species and extinct historical individualities—such as astrologers, alchemists, and men in armor—it is high time they set themselves resolutely to work, for the venerable mysteries by which their dignity has been sustained are beginning to be exposed to the gaze of the vulgar; and if the public should take it into its head some fine day to insist upon a rational explanation of what is being built for it, there will be a vindictive reaction against these ruinous caprices—these orgies of stone. It is not by the mingling of styles, and combining without reason or principle the architectural forms of various ages, that we shall discover the art appropriate to our own, but by making our first consideration the introduction of reason and plain good sense into every conception, using materials in accordance with their individual properties, and acknowledging a frank and cordial adoption of modern industrial appliances.—VIOLLET-LE-DUC (*Rational Building*).

The Psychological Effect of Color

The following from *The Baltimore News* will be read with interest by architects:—

"Grosvenor Atterbury, architect of the Henry Phipps Psychiatric Clinic, has written an article on the terrors of hospital walls and conditions that is attracting attention.

"Mr. Atterbury wrote the article, as he explained, after he had drawn plans for the Phipps Clinic. This building, one of the Johns Hopkins Hospital group, has been highly praised for its beautiful interiors and its many charms rarely associated with the idea of a hospital. Mr. Atterbury goes far enough to indorse pink gowns for patients, which he saw in a small English institution that also had fireplaces and brass beds.

"A part of the article follows:

" 'It is a fair question whether there is not a larger efficiency and whether the price of a perfect ascepticism is not too high. For in spite of all its modern improvements, when you send even the intelligent patient to the hospital you have put him in the incipient stages of mental gooseflesh, whereas the prime requisite of the hospital, after all is said and done, is that it should inspire confidence and hope.

" 'I have been secretly advised that because certain conditions in hospitals are general they are not necessarily right; that possibly the asceptic pendulum has swung too far; that cold white walls, even in the operating room, may be a mistake from an entirely practical point of view.

" 'For, while society recognizes noises and bad smells as evils against which the individual should be protected, and includes the boiler and glue factory, the brass band, and even the church chimes, in the nuisance clause, discordant, hideous forms and colors are not mentioned. While the sense of smell and sense of hearing are protected, the sense of sight is left to protect itself or grow callous.

" 'Even the simple-minded country bull has an opinion in this matter of color. His opinion is entitled to respectful consideration. At any rate it has always received it.' "

Byers Pipe

The A. M. Byers Company, Pittsburgh, Pa., has recently issued Bulletin No. 27. This publication was produced primarily to act as a reminder of the fact that while scientific data evolved by laboratory tests and metallurgical reasoning is not to be discounted, such data is principally of value as representing a confirmation or explanation of actual facts as demonstrated by experience.

It is claimed that the properties of Byers pipe, as indicated by the evidence presented in this bulletin, make it desirable for use when considered in the light of fabricating qualities, resistance to corrosion, ability to withstand severe shocks, vibratory stresses, and other physical strains, although they do not lend themselves to accurate mathematical expression. The existence of such qualities, it is maintained, is clearly indicated by the records of service presented, extending over half a century. As a part of this record are given the experiences of a number of practical men, and at the end of the bulletin is printed an explanation of the resistance to corrosion, etc., which, it is claimed, is not only plausible and extensively accepted, but also bears out the results obtained in actual service.

On the last page of the bulletin, the subject of Average Experience vs. Exceptional Cases is considered, and an attempt is made to show that exceptional cases form a most unfair ground on which to base comparison regarding the life of pipe.

Copy of this bulletin or any desired information concerning the product which it describes, can be had upon request.

A Combined Shade and Ventilator

The Simon Ventilighter Company, Inc., 101 Park Avenue, New York City, has issued an attractive catalog describing the Unit System which it manufactures. It is claimed that the use of this system admits light and air without glare; that it has all of the advantages and none of the disadvantages of a screen, an awning, a blind and a curtain, although it is in form none of these.

In the Ventilighter System, the opening to be covered is divided into a number of separate units. These units or vanes are narrow strips of light fabric, stretched across the opening attached to metal bars in a manner permitting all of the units to be automatically adjusted at any desired angle by a gentle pull or movement of a small handle. When the Ventilighter units are closed, they overlap. They do not touch each other but overhang with an open space between in which position a free circulation of air is afforded. They are intended for use below skylights in window openings, on sleeping or lounging porches, roof gardens, etc.

Catalog referred to, which may be had upon request, gives a great deal of information concerning this device, showing illustrations of buildings where it has been used, and also necessary diagrams for determining measurements where installations are desired.

Gymnastic Apparatus

The Narragansett Machine Company, Providence, R. I., with branch offices in New York and Chicago, has recently issued Catalog F-9 describing and thoroughly illustrating the apparatus manufactured by this concern to equip gymnasiums, locker rooms and physical culture institutions.

Catalog is bound in stiff board covers, is $6\frac{1}{2} \times 9\frac{1}{4}$ in. in size and contains 150 pages. It illustrates a list of old tried and approved forms of apparatus, and some that are new, all of which are said to have been developed and refined to meet the requirements of modern practice. The catalog in its compact form is easy to keep among standard books, and convenient for reference. Architects and others occasionally called upon to design or equip gymnasiums will probably find it to their advantage to secure a copy of the book for their working libraries.

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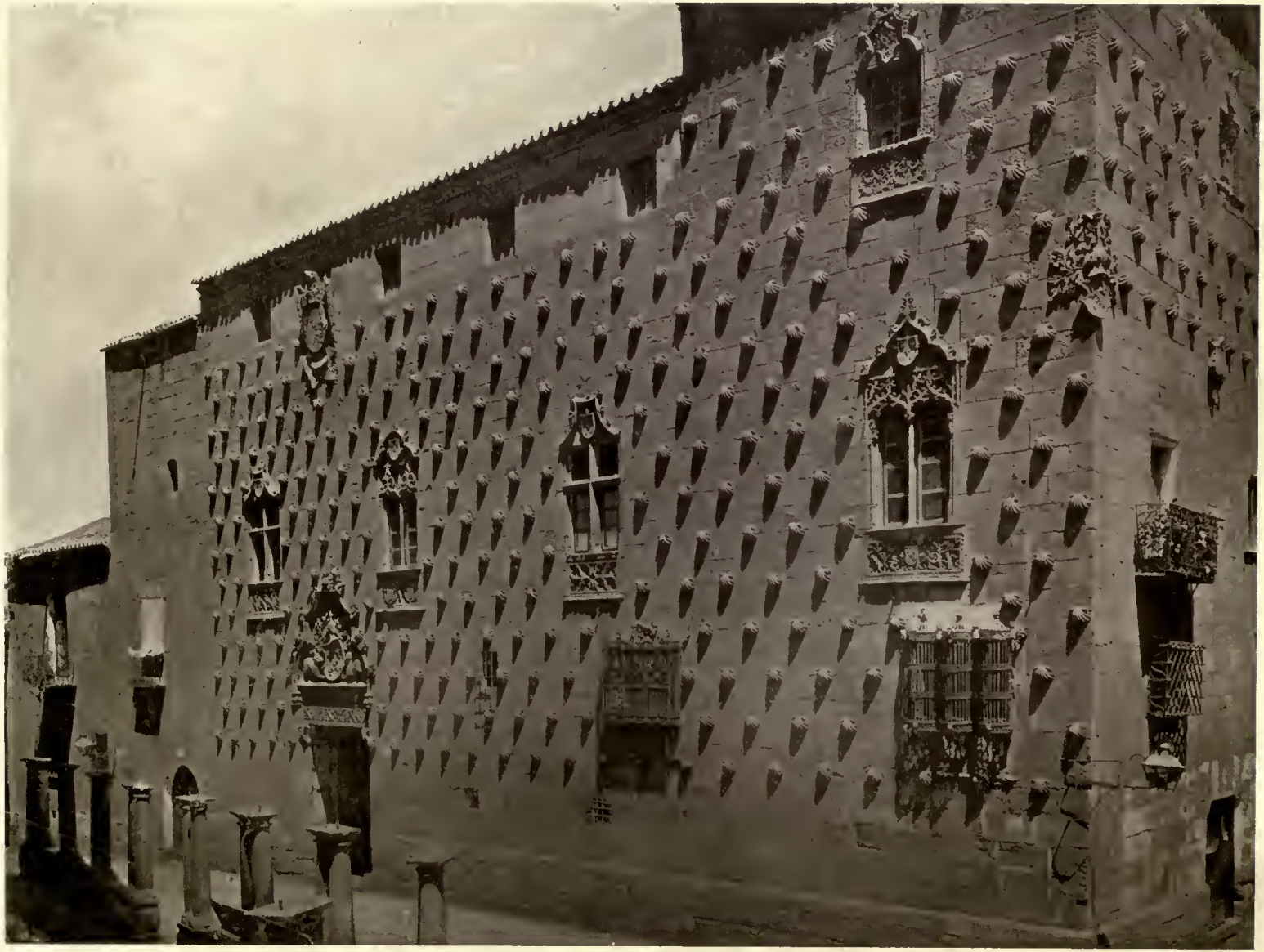

HOUSE OF THE SHELLS, SALAMANCA, SPAIN

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, MARCH 14, 1917 NUMBER 2151

FUNDAMENTALS OF SPECIFICATION WRITING

By FRANCIS W. GRANT

OF ALL the manifold functions of an architect under modern conditions it is safe to say that the one for which his education least prepares him, his temperament least fits him, the one he least enjoys and the one in which he makes the poorest showing, is specification writing. Nature does not seem to have intended that an artist should have to do with such prosaic work as mastering the legal technicalities, terms and processes incident to good specification writing, and the result is the free use of scissors and paste and little progress.

Exceptions are where prosperity permits and breadth of mind appreciates the employment of experts and specialists for this work, men of good judgment who have had experience in the field and can see both sides of a question and preferably men who do not aspire to artistic proficiency.

The writer firmly believes that the standardization of specifications should not be attempted beyond the matter of form and arrangement and that the subject matter should be expressed in the writer's own phraseology properly influenced by consideration of the fact that their appearance in court as evidence is a very probable contingency and standard only insofar as precedent has demonstrated what is specific, suit-proof language and what is not.

The discussion that follows is therefore not to be taken as an attempt to formulate a model specification for copying, but is merely intended to stimulate a contemplation of the why and wherefore of that branch of the architect's work.

The general conditions only will be discussed in this series, structural conditions being made the subject of other articles now in course of preparation.

The first step incident to the preparation of a specification is to determine its form. Legal cap paper, written with a pen on both sides of the paper, and bound at the top, was the original form. To this has succeeded legal size paper typewritten on one side, with page numbering only as a method of notation. Comparatively few architects have progressed beyond this awkward form.

When circumstances permit, specifications should be printed and bound in pamphlet form of convenient shape and size, 6 by 9 inches being recommended as particularly appropriate by reason of its convenient shelving.

Convenience of usage and filing should never be overlooked, as it contributes very materially to efficiency and, to this end, the additional expense of printing is amply justified on large work. Specifications for buildings, the cost of which exceeds, say, one hundred thousand dollars and particularly in the case of public work, should always be printed and sufficient copies issued to cover every possible contingency.

Typewritten specifications should be on letter size paper and thus capable of convenient filing flat with related correspondence. Vertical filing of correspondence has become practically universal and it is in various ways inconvenient to have two sizes of filing devices in one's office. Specifications on legal size paper cannot be filed in standard correspondence files and if folded as documents and so filed they are in an extremely awkward shape for reference.

The practice of binding certain stand-

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ard printed general conditions in an otherwise typewritten specification is not good. It tends to create the impression of "ready made" when "made to order" is expected and paid for. It does not command that degree of attention and respect on the part of the contractor that obtains when the whole specification is alike and made for the particular job in hand, and specifications commanding the respect of the contractors to whom they are particularly and primarily addressed will tend to bring about results meriting respect in about the same degree, seldom greater. Of course the legal virtue of the instrument is not affected by the incorporation therein of standard printed matter, but many a lawsuit would be avoided if the contractor could, by any inducement, be made to read every word of the specification at the time of bidding, and this he is more apt to do if the general conditions appear to have been written for his especial benefit.

Stereotyped general conditions, no matter how exalted their source, or how exactly fitted to the circumstances incident to one of the architect's previous commissions, are almost certain to be misfits in some one or more points, to the embarrassment of the architect employing them, this particularly if he be interested in the literary as well as the artistic success of his work. Some, of course, are not and to such this will not appeal.

There should be a margin of at least 2½ inches provided at the left of each sheet for titles, paragraph numbering and for binding. Titles should be kept wholly without this margin and not placed so as to lead to the impression that they are a part of the text.

Binding at the top is a survival of one of the most awkward features of the specifications of former times and is being abandoned in favor of left-hand binding by all progressive architects incidental to the adoption of letter size paper in lieu of legal size paper.

Binding should be by some such method as stapling, stitching, or pasting, as will render it impossible to remove or insert a page without such mutilation as will plainly advertise the fact. The reason for this is deemed obvious. The specification document should be capable of identification beyond question by a signature or mark on any one page or on the cover. If the specification is so bound that pages can be changed at pleasure without detection, a positive identification would be practically impossible. A document incapable of positive identification under all circumstances is in poor form for submission as evidence in court.

A source of annoyance, loss of time, and frequently an encouragement of the habit of lax attention to specified requirements is the inefficient system of notation commonly employed consisting of page numbers only and these often at the bottom of the page.

The specification should be divided into consecutively numbered paragraphs from beginning to end and if this be done and the work properly indexed accordingly, no need for page number remains.

Each paragraph should be carefully reviewed, amplified and "blue penciled" until it will stand equally well alone or in its intended relation to other paragraphs. Every possible endeavor should be made to avoid the necessity for cross reference to render any paragraph fully intelligible or complete.

The practice of subdividing the specifications into chapters, or any subdivisions whatever other than paragraphs, is to no good purpose, and particularly is it poor practice to head these chapters or parts with partial repetitions of the general conditions or even with reminders of or references to the general conditions. The general contractor needs and wants no assistance in segregating the work of the various crafts and the attempt to do this for him by a method so distinct as by forming the specifications into divisions or chapters intended to define and confine the duties and obligations of his several subcontractors, frequently leads to error or omission and is furthermore not one of the architect's functions except possibly when it is deemed necessary to split the work up into numerous separate contracts in the original letting, which procedure is not recommended.

Of course, by this it is not meant to

advise the total ignoring of the customary subdivisions representing in a general way the division among separate crafts. The work should be taken up in logical sequence (the sequence of building operations), but without committing the architect in the matter of sub-contracting by stating directly or by inference just who of the various craft sub-contractors shall do this, that and the other thing.

Specifications for a building, the contract for which is to be let under one general contract, as all contracts should be let if possible, should not state that centers are to be made by the carpenter contractor, that bearing plates are to be set by the brick mason, etc., for such segregation of functions is no proper concern of the architect. That electricians and the various piping craftsmen should not be permitted to cut structural members is, however, another matter and must be provided against.

Titles should be provided for as many paragraphs as possible and these kept wholly outside the margin of the text and in no instance made to read with and form a part of the text of the specifications.

An index by paragraphs should always be provided. This should be carefully cross-indexed so that by whatever name a subject is thought of, it can be found in the index. A mere table of contents is by no means an index. If lack of time or other circumstance prevents an alphabetical index properly cross-indexed, it is better to leave it so than to introduce a mere table of contents.

Brevity should be the constant aim of the specification writer, but never at the expense of perfect clarity. The specifications must be complete and the character of the drawings will largely determine how much must be said to make them so, for the information to be given is an absolute quantity. Leave nothing to be determined by the flexible and wholly unreliable rule of "customary practice."

That mere appearance of brevity which is secured by transferring essential provisions from the General Conditions of the specifications to other instruments is not thought by the writer to be good practice, the Standard Documents of the American Institute of Architects to the contrary notwithstanding.

Every contractual relation should be shown on the drawings or expressed in the specifications, and when once stated, either graphically or in writing, should, under no circumstances, be repeated or further explained, qualified, or discussed in the specifications or in any other instrument of the contract. There should be no such thing necessary as a separate paper called "Instructions to Bidders," and the "Bid Blank" should never be made the vehicle for specification matter of any kind whatever.

More than sufficient matter to secure beyond question a quibble-proof contract and the desired quality and quantity of material and labor is not only redundant and a debasement of the English language, but is almost sure to be prejudicial to the efficiency of the instrument.

All agreed that the ideal specification is one that is "boiled down" to the fewest words possible without the omission of any essential bit of information. The boiling-down process, however, consumes time, and specifications are frequently permitted to pass out of the architect's office more verbose and recondite than even their authors approve for mere lack of time to rewrite that which should have been treated as a rough draft only. The architect who resists the pressure applied by the owner at this critical point and insists upon sufficient time to produce a finished specification will build up better prestige for his office and may cultivate a better impression in the mind of the owner as to the reasonableness of professional charges.

Superfluous matter in the specifications tends to conflicting, and sometimes to impossible, requirements. For instance, the requirement that "all cement shall be of uniform bluish-gray color" followed by a complete schedule of the chemical properties that the same cement shall possess is superfluous and meaningless, yet might cause considerable annoyance and friction during the field education of some inspector, yet just such redundancies are common in otherwise good work.

The drawings should express every-

thing capable of graphical representation and the specifications should not repeat what is clearly shown on the drawings. With very few exceptions, schedules of quantities and dimensions should never be written into specifications.

Eliminate all lists of materials from specifications. Drawings so incomplete that quantities and dimensions cannot be taken from them by the contractor are not ready for the specification writer and are most certainly not ready for submission to bidders. The builder alone should be held responsible for the correctness of the quantities upon which he bases his proposal to erect the building and most builders will consider it safer to recompute quantities before investing their money at the risk of the architect's accuracy in a line wholly outside his profession.

Those architects who have entered the profession as graduates from some one of the several building crafts are the ones most liable to indulge in a display of what they are proud to advertise as an intimate knowledge of the art of building by specifying the exact number of I-beams of each dimension and their length, and other similar data distinctly within the builder's province and not theirs.

If exact lists of quantities are out of place in an architect's specifications, approximate lists are still more so and no attempt whatever should be made by the architect to compute quantities for builders. Exceptions to this rule are only those where it is impossible to give the necessary information on the drawing as to the number of coats of paint, size and number of hinges, etc.

A method of procedure recommended as tending to the minimum of verbiage consistent with clearness of expression is to write the first draft with perfect freedom, then "blue pencil" and eliminate as you would a telegram, giving the benefit of doubt to the retention of words and phrases in every instance.

Every item essential to a complete knowledge of what will be required of the contractor should be included. This rule should be observed to such an extent that nothing whatever remains for the formal contract except the amount of the contract and the dates of execution and completion. When a specification is thus complete no need whatever exists for a formal separate contract instrument and the transaction may be completed by mere exchange of a proposal in unequivocal language properly dated and signed, and an acceptance similarly conditioned. In fact, such is the ideal form of building contract, the usual formal contract being nothing more or less than an instrument made use of for picking up items overlooked or neglected in the specifications.

The language employed in writing specifications should always be true to the title, i.e., specific, stating what *must* or *shall* be done and never what *may* or *should* be done. The specification writer should bear in mind that he is writing law and he must not depart from the mandatory forms of expression. Although this would seem to be self-evident, it is a fact that specifications from the best of offices are often deficient in this particular. Such are frequently not specifications at all, but mere essays on construction.

The point sought to be established by the preceding paragraph is aptly illustrated by the following excerpts from the specification for an important building, the architect for which had a national reputation and a very lucrative practice:

> " . . . and it reserves the right to waive any informality in and even to reject any and all bids. . . . Parties who are unfamiliar with this class of work, who have never done large work, who it is well known have not the necessary plant or who have done work for . . . before, but have given unnecessary trouble to . . . or parties not known to be financially responsible, parties known to be unreliable, litigious, and have been known to do poor work, all may well save themselves the trouble of figuring on this work. . . . There are bound to be many changes in the work on so large and complicated a building as this is as it goes on . . . the plans but tentatively show how many doors there will be ultimately or how many lineal feet there will be of partitions or of tile flooring, etc., . . . The architect has endeavored to make this specification perfectly clear and all-covering, and the bidders are requested to refrain from asking for further information, particularly before reading it all over. Unless very relevant no questions will be answered by the architect. The answering of all such questions entails

considerable trouble, for if the architect does answer them both question and answer must be sent to every bidder . . . with the terms of the contract. That contract is for a complete building; it is certain that many slight changes will become necessary as the work progresses. . . . In connection with this matter of changes it is hardly possible that changes will be made that may affect the time of the completion under this contract and bond. Chances are that any changes that may become necessary will be made well in advance of the time in which special material therefor may be needed . . . should the architect desire to make a change in the material or workmanship in certain rooms or details, he is not to be confronted with the statement that such work has been ordered and partly executed."

As previously stated, the language employed in specifications must be specific. To specify that certain named articles or processes "or equal" shall be used is not using specific language. Such qualifying clause as "or equal" has the effect in practice of losing to the owner the benefit of the architect's time and judgment used in first determining what should be used, for these words, reopen the subject and invite the contractor to look the market over and let the architect know if he can do better by substituting. Most contractors are quick to accept this invitation and the architect is then called upon to consider the comparative merits of the proposed substitution, and unless he can affirmatively declare that the proposed substitution is inferior, it must be permitted. The architect is without discretionary power in this matter, but is compelled to listen to the claims advanced in the interest of all proposed substitutions. Many contractors jump to the conclusion that "or equal" means that they shall determine what is equal, and in the absence of a clause distinctly reserving discretionary power in this matter to the architect, the courts will probably hold that they are, or at least will place the burden of proof to the contrary on the owner.

A case of record pertinent to this discussion is that of Camp vs. Neufelder, 95 Pacific 640, where the architect refused to admit that any other sidewalk light was equal to the one specified (he having specified that light or equal); the light specified was furnished and the court compelled the owner to pay $600 extra to reimburse the contractor for what he might have saved by substituting a light he thought equal, the merits of which the architect refused to investigate.

A method capable of application to a large extent and strongly recommended is to describe physical or chemical properties or the functions required without using trade names. Another method is to provide for the insertion in the bid blank of a list of substitutions desired to be made by the bidder, provision being made that failure to adopt such alternative proposal bars further consideration of changes in the items for which alternate was proposed.

Specifications should be responsible to local custom and conditions, both as to materials called for and as to terms employed. No attempt should be made to write specifications for distant work until after a careful investigation of this subject. What is entirely proper in the architect's home town may be the height of folly where the building is to be erected. It discredits an architect to specify fir framing lumber where nothing but spruce or hemlock is marketed for the purpose or southern pine flooring where fir flooring is exclusively used; broken stone may be an appropriate aggregate for concrete, and it may be that gravel is the only available material for the purpose. These and all similar questions should be determined before attempting to write the specifications.

Summarizing, it is recommended that specifications combine the following features:

1. Should not be a combination of printed and typewritten matter.
2. Should be printed and bound in pamphlet form if possible.
3. If typewritten, should be on letter-size paper, bound inseparably at left-hand edge.
4. Should have ample margin at left, with all titles confined to margin.
5. Notation should consist of consecutive paragraph numbers, continuing through entire specification without interruption.

6. Should not attempt to define, limit or otherwise meddle with relations between contractor and subcontractor.

7. Should be indexed and cross-indexed in proper manner or not at all.

8. Should be as brief as the character of the drawings will permit and as extensive as the character of the drawings demand.

9. Should be rewritten at least once before issuance and every repetition and redundancy eliminated and all ambiguity cleared up.

10. Should never contain quantities or dimensions not absolutely essential to a clear understanding of the drawings.

11. Should at all times be mandatory in form of expression and never discoursive or merely permissive.

12. Should be definite, in every instance naming just what is wanted without the qualifying words "or equal."

13. Should absolutely provide against contractor's exercise of discretionary power in matter of substitutions.

14. Should be responsive to local conditions and custom and to related legislative acts.

THE LATE HERBERT BATSFORD—*By* W. Gedney Beatty

IN the death of Mr. Herbert Batsford of London, who died on Sunday, January 14th, the architectural profession has suffered a material loss. Few practising architects have aided their profession or raised the standards of architectural beauty and proportion as did he. Mr. Batsford, at the time of his death, was fifty-six years old. At the age of twenty-one he had entered the architectural book business established in 1842 by his father, Bradley Thomas Batsford; till finally the entire control of the business passed into his own hands. He was a man of great energy and organizing power.

A worthy successor to such publishers as Taylor and John Weale of the eighteenth century, the firm of B. T. Batsford produced books which are to-day found in the libraries of all architects of any prominence throughout the English-speaking world.

It is a certainty that many of the buildings erected in this country show the direct influence of such books as Gotch's "Architecture of the Renaissance in England," and the two other works on English domestic architecture of an earlier and later period. Many of us will remember the book, "Old Cottages and Farm Houses in Kent and Sussex," of which many copies were sold in this country sixteen or seventeen years ago. It was a book of unexcelled quality in illustration, printing and paper, and one could not but realize that in its production something more than mere commercialism was present; and this was the aim and object of Mr. Batsford's work. The personal elements of interest and enthusiasm were apparent in every book published by his firm. The list would be a long one, and would include a series of volumes following in scope the charming one on Kent and Sussex, the six large volumes on English domestic architecture, Richardson's "English Monumental Classical Architecture," "London Churches," "Formal Gardens," "Old Colleges of Oxford," and a score of others.

Mr. Batsford would often accompany his authors on trips of research for material; and his own collection of architectural photographs, which he had gathered in the many years of his work, was a notable one, from which he drew inspiration and material. While he did not write the architectural books, many of his suggestions, given through his knowledge and experience, were included in the books as published.

To those who had the pleasure of meeting and knowing Mr. Batsford, his memory will not soon fade; for his enthusiasm on any subject discussed, combined with his deep knowledge of things architectural, was ever uppermost.

Time tends to level the influence of most of those who pass away; but few inspirations will last longer in the architectural profession than the books which Herbert Batsford produced. No better monument can be for him.

HOWARD HIPPACH MEMORIAL ATHLETIC FIELD, ABBOTT SCHOOL, FARMINGTON, ME.

MR. ARTHUR WOLTERSDORF, *ARCHITECT*

HOWARD HIPPACH MEMORIAL ATHLETIC FIELD, ABBOTT SCHOOL, FARMINGTON, ME.

MR. ARTHUR WOLTERSDORF, *ARCHITECT*

1723

ONE OF THE PANELS FLANKING THE GATEWAY

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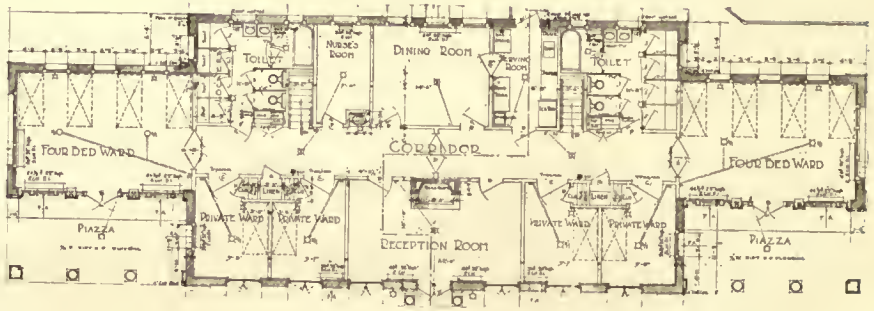
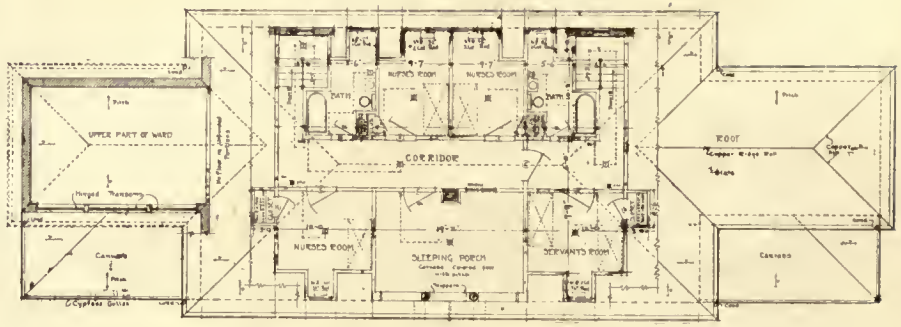
MR. ARTHUR WOLTERSDORF, *ARCHITECT*

BROOKLINE TUBERCULOSIS HOSPITAL, BROOKLINE, MASS.

MR. HAROLD FIELD KELLOGG, *ARCHITECT*





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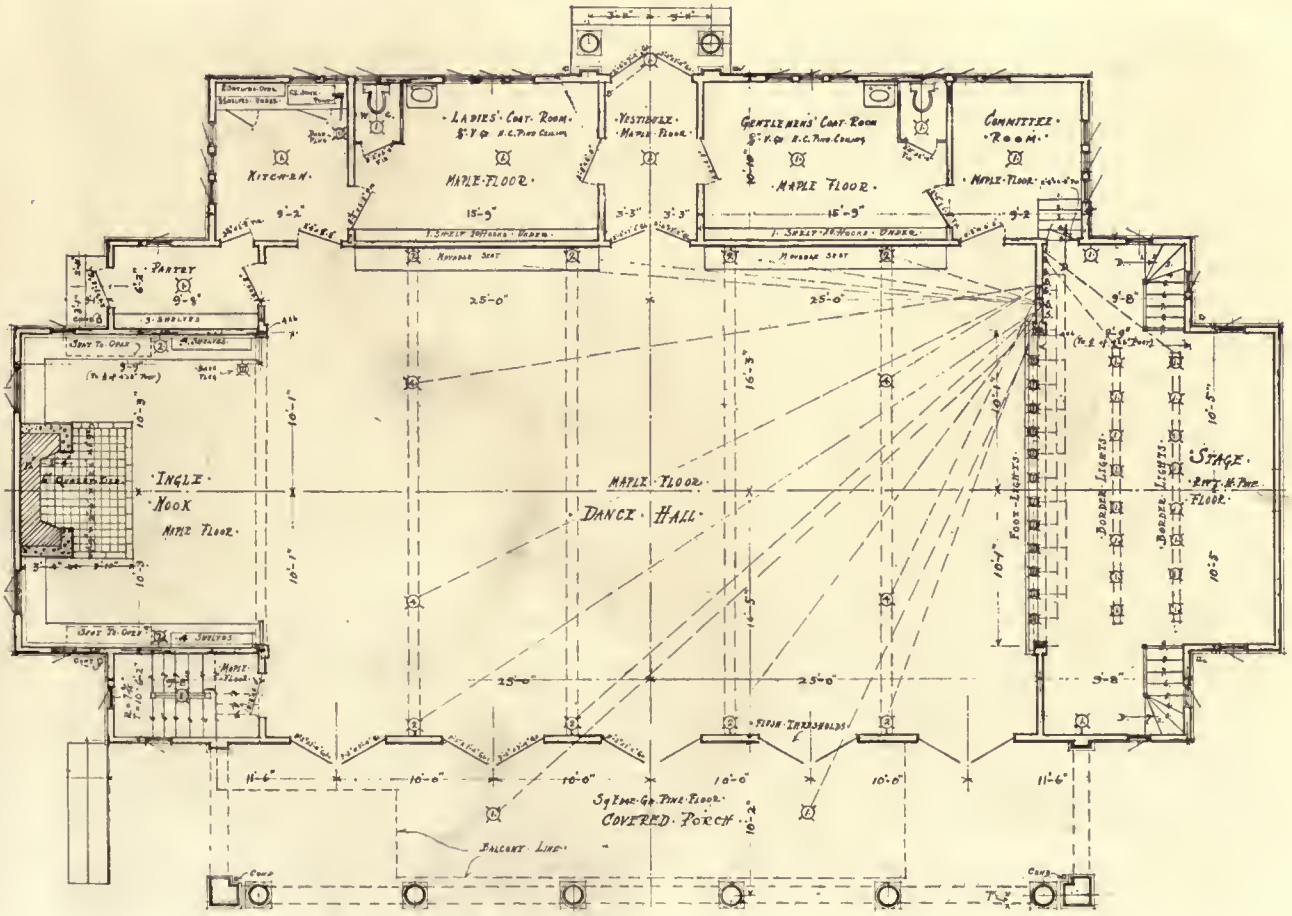

DUXBURY YACHT CLUB, DUXBURY, MASS.

MR. HAROLD FIELD KELLOGG, *ARCHITECT*

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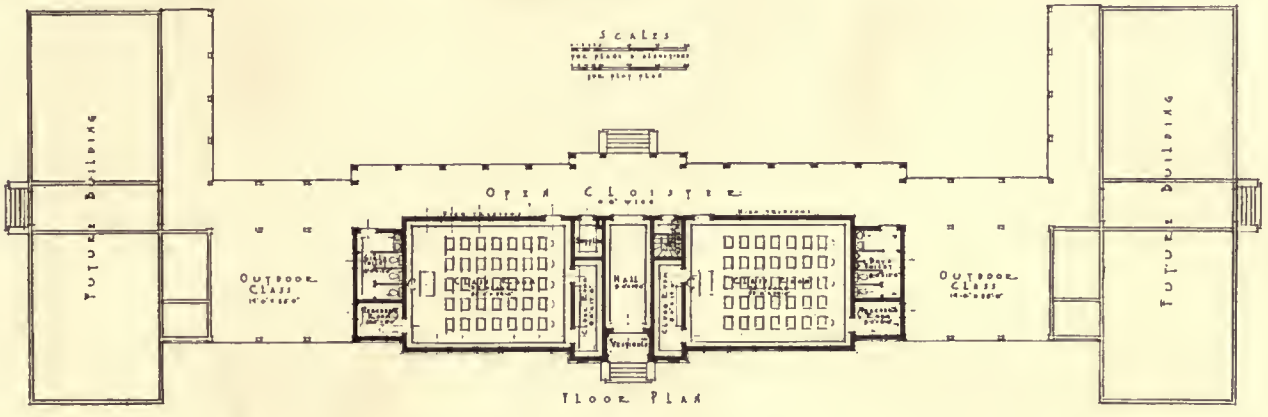
DUXBURY YACHT CLUB, DUXBURY, MASS.

MR. HAROLD FIELD KELLOGG, *ARCHITECT*

PERSPECTIVE



FLOOR PLAN

SIDE ELEVATION

PLOT PLAN

DESIGN FOR
PAVILION TYPE OF
SCHOOL HOUSE
TO BE BUILT OF
SOUTHERN YELLOW PINE

SUBMITTED BY PINE BURR

FIRST PRIZE DESIGN

SOUTHERN PINE ASSOCIATION'S COMPETITION FOR SCHOOL BUILDING

MR. NEVIL C. SETTOON, *ARCHITECT*

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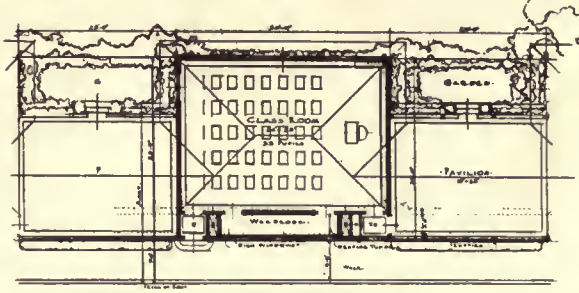
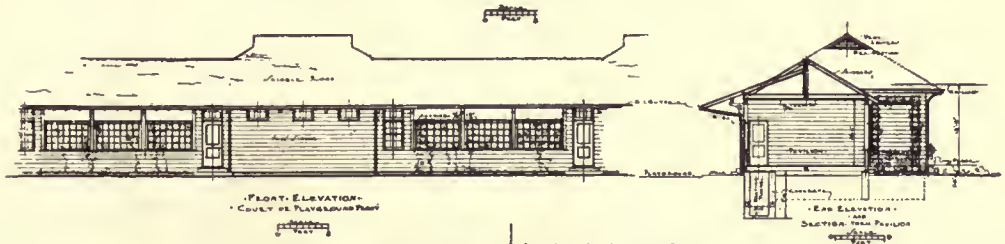


FLOOR PLAN

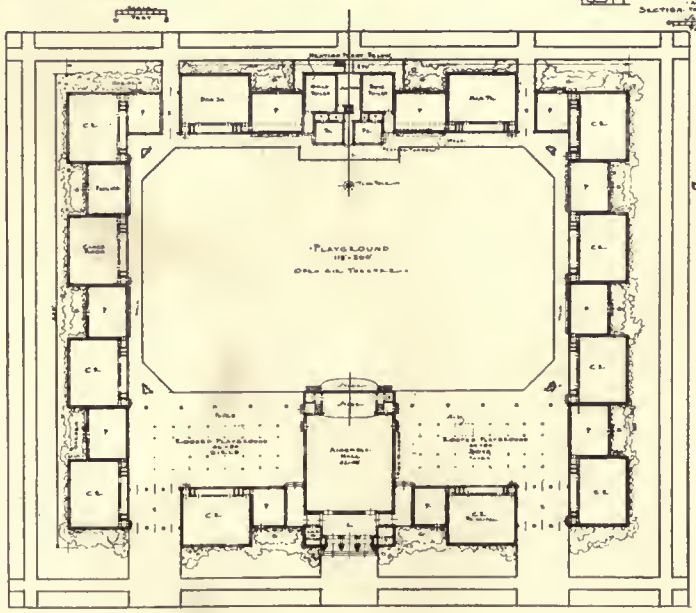


FRONT ELEVATION

EAST ELEVATION

NOTES

A CLASS ROOM AND ONE PAVILION CONSTITUTE ONE UNIT. UNITS TO BE BUILT AS REQUIRED AND SHOULD BE SYMMETRICALLY ARRANGED PREFERABLY ON MAIN AXIS CLOSING WITH ASSEMBLY HALL. BUILT OF SOUTHERN YELLOW PINE.



GROUND PLAN

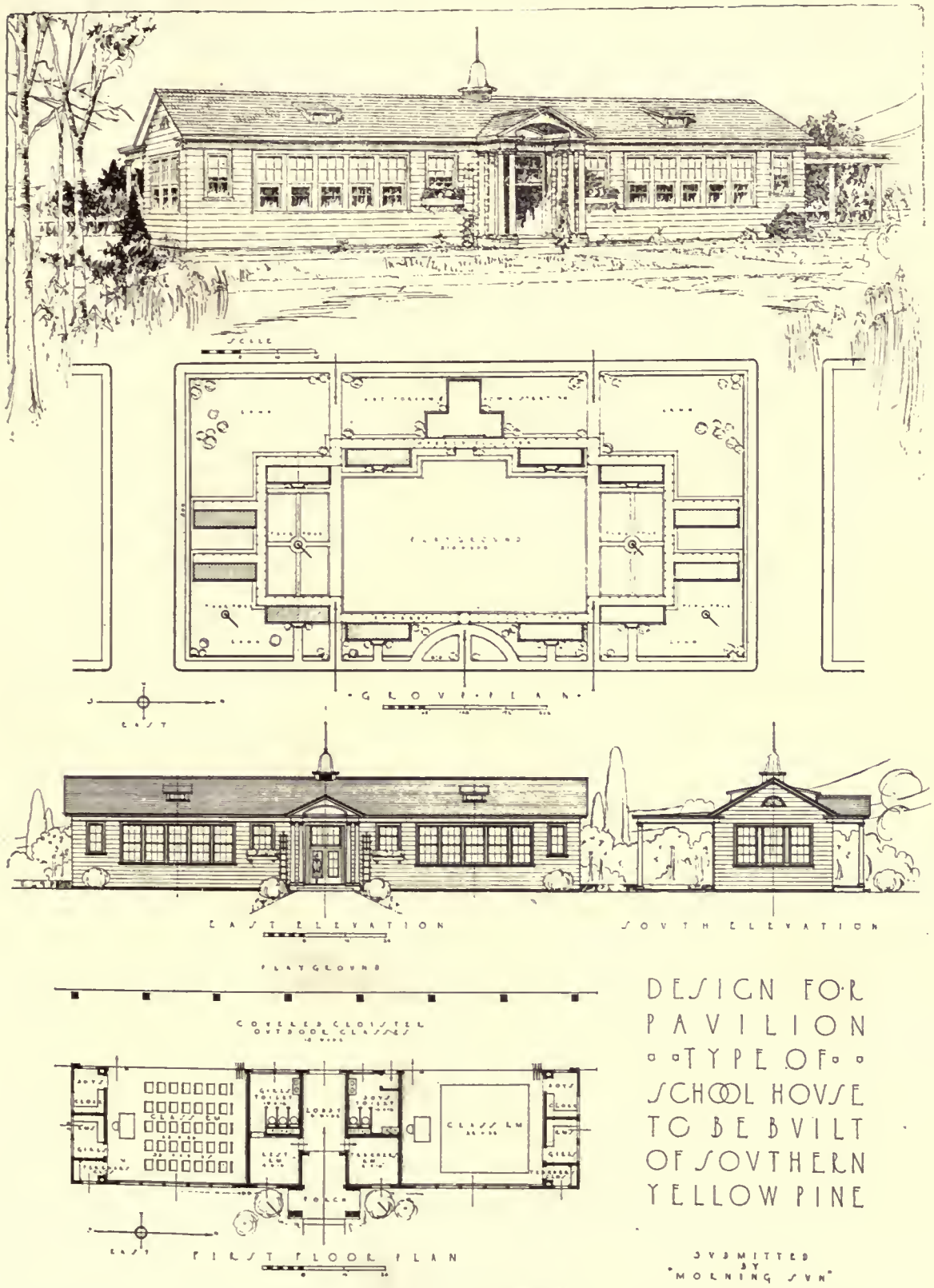
DESIGN FOR PAVILION TYPE OF SCHOOL HOUSE TO BE BUILT OF SOUTHERN YELLOW PINE

SUBMITTED BY

SECOND PRIZE DESIGN

SOUTHERN PINE ASSOCIATION'S COMPETITION FOR SCHOOL BUILDING

MR. FREDERICK G. WALKER, *ARCHITECT*



THIRD PRIZE DESIGN

SOUTHERN PINE ASSOCIATION'S COMPETITION FOR SCHOOL BUILDING

MR. CLIFFORD EVANS, *ARCHITECT*

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VOL. CXI MARCH 14, 1917 No. 2151

SPECIFICATION WRITING

CONSIDERING the great and usually unquestioned importance which attaches to the architect's specifications, it is difficult to understand the attitude of the average practitioner toward them. The work incident to the production of a specification seems to be regarded as mere drudgery, and avoided by the designer whenever possible. The result is entirely in line with what might be expected under these circumstances. In other words, it is probably no exaggeration to state that three-quarters of the specifications issued from architects' offices are inaccurate, ambiguous, incomplete, indefinite and redundant. Revision by a fully competent conscientious specification writer, who recognized specification writing as his mission and had no aspirations beyond fulfilling that mission to the best of his ability would probably result in the elimination of much useless verbiage, a clear statement of requirements, and a document that in general might be regarded as accurate, comparatively brief, yet comprehensive and direct. It is too much to expect to remold a temperament, and that would probably be necessary before the architect, who ranks as a designer of marked ability, could produce a specification possessing the qualities referred to. The obvious course to pursue, then, would seem to be for the designer to collaborate in this work with some one who is near enough to him in ability to appreciate his ideals and understand how they are to be secured through the medium of building materials, and yet who is practical and methodical enough to set down the requirements in straightforward English without equivocation or unecessary words, and at the same time omit nothing that is essential.

Undoubtedly much has been done within recent years to assist the specification writer. Men who have given this subject careful study, and who by training and temperament are fitted for this character of work, are beginning to make the results of their labors available to the profession at large. Unfortunately, the erroneous impression has heretofore prevailed in many quarters that a specification meeting the requirements of one office would prove unsuitable for another. While it is to a certain extent true that each separate piece of work demands its own description, there are so many features of building work that are the same in all cases and so much can be classified as general conditions in every specification, that a certain degree of standardization in specifications is not only feasible but highly desirable.

In another part of this issue is presented an outline of the work done by Mr. Francis W. Grant, in the preparation of a book on specifications that might well be considered a step toward this goal of standardization. We commend it to the attention of our readers generally. Probably there will be some who will not agree with all the statements made or the methods of treatment suggested, but in any event this outline seems to indicate specification practice well in advance of that in force in a great majority of offices, and for that reason deserves careful reading. It is not reasonable to believe that the slipshod methods pursued in the past will be tolerated indefinitely.

Owners are beginning to question a specification that contradicts itself on succeeding pages and leaves matters so indefinite as to obviously allow substitutions or modifications without number, and the time cannot be far distant when this doubt, if not removed, will lead to an entire loss of confidence in the architect's ability, at least as a business man. Already it is seriously questioned in some quarters, and offers the greatest argument in favor of the plan of a single contract. Unless architects will recognize the fact that the production of a worthy design regardless of its pre-eminent importance to the final result is only one of the functions of an architect, there is danger of its ultimately becoming merely the work of a department in an organization that will entirely usurp the architectural function and combine it with that of builder.

LICENSING BUILDERS

FOLLOWING the usual course of suddenly initiated or revived popular movements, the agitation for the licensing of builders which resulted from the collapse of a building in New York City some five months since, has practically subsided. Nothing tangible was accomplished and presumably there is now as much likelihood of other failures taking place due to improper methods pursued by builders as there was before the subject received the attention it commanded following the disaster referred to. As a general statement it may be said that too many safeguards cannot be placed around building operations. Already architects are subject to examination to determine their fitness before they are permitted to practise in a number of states in the Union, and others are considering the enactment of similar laws. In addition to the steps taken to insure the ability of the architects, the plans which these specially trained men prepare are usually submitted for approval to some state or municipal bureau before they can be executed. Those to whom the construction work falls, however, are illogically enough not required under present laws to give any evidence of their fitness or ability. Any one with the requisite amount of capital can engage in the building business. That the public health and safety can be endangered quite as much through faulty methods of building as through faulty design does not seem to have been realized. Inspection, however rigid, does not answer the question. It is practically impossible to supervise construction work so carefully through municipal bureaus or otherwise, that improper and inadequate methods or even defective materials cannot be used. If, on the other hand, builders were required to demonstrate their ability before being permitted to engage in construction work, and were then liable to forfeit their licenses in the case of any material deviation from recognized standards of building construction practice, found in their work, the public would be safeguarded far beyond any protection which it now enjoys. It is to be hoped that architects and reputable builders who must realize the importance of the matter more keenly than the general public will not delay action until forced into it by an aroused public following further failures. While contemplation of "what might have been" is always in a sense futile, it is undoubtedly true that if builders had been properly licensed some years ago much loss of both life and property would in all probability have been prevented, and the character of a considerable portion of our construction work done in recent years greatly improved.

THE CURRENT ARCHITECTURAL PRESS

COMMENCING with the January, 1917, issue, *The Brickbuilder* assumes a new name, *The Architectural Forum*. Reasons for this change in name are set forth in an editorial, from which we learn that development along broader lines than was possible under the former title was desired, and while architecture in materials of clay will be a feature of the *Architectural Forum*, buildings executed in other materials will also be presented.

The new zoning ordinance in New York City is the subject of a leading article, contributed by Louis Graves. The need of districting in all of our large cities is so thoroughly realized that the example set by New York will undoubtedly be

(FROM THE ARCHITECTURAL FORUM)

TAFT SCHOOL, WATERTOWN, CONN.
BERTRAM GROSVENOR GOODHUE, *ARCHITECT*

soon followed by other municipalities. If there is to be a coherency of growth, a conservation of the æsthetic possibilities of development and proper safeguards set about real-estate values there is apparently only one real and lasting remedy, the zoning or districting of cities, large and small. These facts are made apparent in the article in question.

An article on some small English buildings of the late Georgian period is practically a re-telling of details and re-illustration of similar buildings, recently appearing in the English architectural press.

The Taft School, Watertown, Conn., Bertram G. Goodhue, architect, is illustrated in this issue. The general grouping or massing is excellent, while the detail shows the delicacy that characterizes Mr. Goodhue's work.

The Second Unitarian Church in Brookline, Mass., Edwin J. Lewis, ar-

(FROM THE ARCHITECTURAL FORUM)

TAFT SCHOOL, WATERTOWN, CONN.
BERTRAM GROSVENOR GOODHUE, *ARCHITECT*

chitect (illustrated in THE AMERICAN ARCHITECT last year); the Ceramic Engineering Building at the University of Illinois, by James B. Debelka; some coun-

(FROM THE ARCHITECTURAL RECORD)

PART OF UNFINISHED CARRIAGE COURT
SHOWING WALL OF CLOISTER GARDEN; THE SMALL ARCHES ARE FILLED WITH FRENCH TREILLAGE

try houses by Hobart B. Upjohn, and a well designed group of houses in Salem, Mass., by William G. Rantoul, are among the illustrations shown.

The Architectural Review for January is a special issue of Workingmen's and Low Cost Houses. It contains a large amount of material of more or less originality. Of special interest, perhaps, are the competitive designs in the National

(FROM THE ARCHITECTURAL RECORD)

POND GARDEN—WOOLEY HALL, MAIDENHEAD, ENGLAND

Americanization Committee Immigrant Housing Competition. These offer considerable of suggestive value in the designing and planning of low cost houses. In an article contributed to this issue by E. T. Hartman, secretary of the Massachusetts Civic League, housing essentials are discussed in what the author believes

(FROM ARCHITECTURE)

POSTAL LIFE BUILDING, FIFTH AVENUE, NEW YORK
YORK & SAWYER, *ARCHITECTS*

is the order of their importance; namely, health, training, education, and the development of the right attitude toward society. The presentation is able.

* * *

The leading feature of the February issue of *The Architectural Record* for February is an illustrated article on the new landscape plan for Wooley Hall, Maidenhead, England, by Thomas H. Manson.

This picturesque place is the English home of one of America's rich men. The article describes the process and the plan in the evolution of a garden whose picturesqueness is the result of careful work in landscape architecture.

The first of a series of articles on English Architectural Decoration, by Albert E. Bullock, appears in this issue and

(FROM THE JOURNAL OF THE A. I. A.)

TWO-TONE POSTER, 30 x 40 INCHES
DRAWN BY FRANK BRANGWYN TO AID THE BELGIAN ARCHITECTS IN ENGLAND

gives promise of much historical interest. Mr. Peter B. Wight describes some recent additions to the buildings for the University of Chicago, Max Judge contributes an English Study of the Palais de Justice, Brussels, and there is a posthumous article, An Oasis in the Bronx, by the late Montgomery Schuyler.

* * *

Some recent work by Aymar Embury II absorbs considerable space in the Feb-

ruary issue of *Architecture*. Of greater interest, perhaps, is the Postal Life Building, in New York, designed by York & Sawyer. This building is situated on one of the important corners of Fifth Avenue, and by its excellence lends dignity to its location.

A school for dancing by G. A. & H. Boehme, architects, on West 57th Street is shown by a single picture.

As indicating the decorative possibili-

(FROM THE JOURNAL OF THE A. I. A.)

"THE CARNIVAL AT MADRID, THE BATON DANCE," BY VIERGE

ties in detail and color of modern terra-cotta, this subject is of interest, although unsatisfactory in composition.

In the text, Mr. Swartwout continues the discussion of the classic orders of architecture, treating in the present article of the Doric.

* * *

Mr. William Laurel Harris' article in the February issue of *Good Furniture*, on Examples of Ancient and Modern Craftsmanship to be found in New York, will be of interest to architects.

There can be no doubt that there is a revival of interest in good craftsmanship in this country. It will not, perhaps, be an exaggeration to state that our most important artistic development during the next decade will be the work of the crafts-

(FROM THE ARCHITECTURAL FORUM)

CERAMIC ENGINEERING BUILDING, UNIVERSITY OF ILLINOIS, CHAMPAIGN, ILL.
JAMES B. DIBELKA, *STATE ARCHITECT*
PROF. JAMES WHITE, *SUPERVISING ARCHITECT*

man. Stimulation of effort in this direction will have the most salutary influence, and the co-operation of architects will hasten the result.

Mr. H. D. Eberlein's series on Old Spanish Furniture is continued, and Mr. R. F. Bach contributes the seventh installment of his interesting series on For-

(FROM THE ARCHITECTURAL FORUM)

GROUP OF HOUSES, SALEM, MASS.
WILLIAM G. RANTOUL, *ARCHITECT*

eign Artists in French Furniture Design. The numerous illustrations in this issue of interior design, furniture and other accessories are up to the usual high standard.

Comment is made, and at considerable length, in the February issue of *The Journal of the American Institute of Architects* on the omnibus public buildings bill, which passed the House of Representatives on January 19th. This bill is now before the Senate and indications are that it will not be passed by that body. There is even strong possibility that it may not even be reported for discussion.

In the *Journal's* comment on the de-

(FROM GOOD FURNITURE)

EIGHTEENTH CENTURY SCONCES SHOWING THE QUALITY OF EARLY AMERICAN CRAFTSMANSHIP

Recently Acquired by the Metropolitan Museum of Art

bate in the House, a number of very interesting extracts from the *Congressional Record* are printed. These all indicate the somewhat hazy idea of the present congressmen concerning the duties and dignities of the practice of architecture.

In this issue of the *Journal*, Mr. Peter B. Wight makes a suggestion for a section to be included in all future State laws regulating the practice of architecture.

Other features are the experiences of a member of the Institute on the war front in France, and the continuation of a series of articles on "Architectural Draftsmen." In the latter, the present issue comments on the work of Daniel

(FROM THE INTERNATIONAL STUDIO)

SELF PORTRAIT, BY THE LATE WILLIAM M. CHASE

Urrabieta Vierge. The illustrations accompanying this article are of more than usual interest, and indicate the highest measure of artistic ability.

The usual Institute notices, and other

(FROM ARCHITECTURE)

OFFICE BUILDING, FRONT STREET, NEW YORK
AYMAR EMBURY II, *ARCHITECT*

matters of interest to members, are printed, as are also the awards of December 27, 1916, of the Beaux-Arts Institute of Design.

* * *

While the February issue of *The Inter-*

national Studio does not present current material of specific architectural interest, it nevertheless records and illustrates exhibitions and current happenings in the field of art in this country and Europe in the usual manner.

The Buccleuch Miniatures in the Victoria and Albert Museum are partially illustrated and an article reviews miniature painting and collections and their educational value.

A number of sketches made in the war zone by British artists are reproduced, and there is a third article on the recent Arts and Crafts exhibition at the Royal Academy.

* * *

The Western Architect, in its January issue, illustrates a number of subjects, the details of which will be found in the index to the current architectural press on another page.

A feature of this issue is the publication of some of the plans entered in a competition held by the City Club of Chicago for the development of a typical quarter section of land (160 acres) in the outskirts of Chicago. The interest in this competition lies mainly in the widely different attitudes taken by the competitors whose plans are published, toward the proposed development of this large tract, and, while purely theoretical, they present much of suggestive value.

As pendant to the illustration of the recently completed Ceramics Building at the University of Illinois, Mr. Claude Bragdon's address on the occasion of the dedication of the building is printed. It is on the Use of Ceramic Products in the Artistic Embellishment of Buildings. From both the practical and the artistic side this address is worth a careful perusal. There can be, and often is, an inartistic use of an artistic material. This danger is very ably discussed by Mr. Bragdon, who concludes with the following statements:

"Ceramics have, as regard architecture, a distinct and honorable function. This function should be recognized, taken advantage of, but never overpassed. They offer opportunities large but not limitless. They constitute one instrument of the orchestra of which the architect is the conductor, an instrument beautiful in the hands of a master, and doubly beautiful in concert and contrast with those other materials which make that music in three dimensions: architectural art."

Southern Pine Association Competition for School Building

The Southern Pine Association of New Orleans, La., recently conducted an architectural competition for the best design of a Pavilion type of school building built entirely of Southern Yellow Pine. There were three prizes and five honorable mentions. The prizes were as follows: First prize, $300; second prize, $150; third prize, $50. The competition closed Dec. 1, 1916. Over forty drawings from all parts of the United States were submitted, and some of them were notably meritorious.

The awards were made as follows:

First Prize—Nevil C. Settoon, New Orleans, La.

Second Prize—Frederick G. Walker, Chicago, Ill.

Third Prize—Clifford Evans, Birmingham, Ala.

Honorable Mentions:

George Hunt Ingraham, Boston, Mass.
William Leslie Welton, Birmingham, Ala.
Thomas M. Harlee, New Orleans, La.
Albert F. Keymar, Milwaukee, Wis.
J. B. Blair, Boston, Mass.

The Southern Pine Association sought to develop the best plan for a one-story school building, believing that there was much room for improvement in the present methods of housing school children. The advantages of the Pavilion type school building are these: saves life, spares anxiety, preserves health, saves money, assures better school work, does away with stair climbing, provides more fresh air, additions can be made easily, has a better playground and permits more variety in design.

The Pavilion type can be constructed in units, so that a small community can enlarge their building as necessity requires without losing architectural beauty or sacrificing play space. The circular

announcing the competition points out that "Fireproof schools have not always proved to be fireproof, and they most certainly are not panic-proof. Often more children are hurt in the mad rush to escape the fire than in the fire itself. Stairways are the traps where children are caught in case of fire or fire panic. The Pavilion type school building eliminates fire danger. In such a building the pupils are all on the first floor and the exits are so placed that the children can leave the building in a very few seconds. There has never been a life lost by fire in a one-story school building in the history of the United States."

As the Pavilion type is built around the lot instead of placed in the center of it the playground is all in one large block, away from the street, instead of being broken up into small, narrow strips. Part of the court can be roofed over and serve as a playground on rainy days or a pleasant place for out-door classes.

A Correction

The power plant and office building of the Philadelphia Textile Machinery Co., Messrs. Day & Zimmermann, architects and engineers, illustrated in our issue of February 21, was incorrectly titled as that of the Cincinnati Bickford Tool Co., whereas the only illustration of the latter company's buildings was the full page plate on the page just preceding that of the buildings titled in error.

Hastings' Exhibition, Columbia University

At Columbia University, in the Avery Architectural Library, is now to be seen a most interesting collection of drawings, the work of Carrere and Hastings, architects.

They demonstrate the utmost facility of drawing, fertility of design and accuracy of draftsmanship. One rarely sees even in New York so varied and uniformly excellent a collection of drawings of executed work. There are included several fine renderings by Jules Guerin.

It will be illuminating to the interested layman to observe in this exhibition the architect's mode of attack, and, above all, will be demonstrated the conscientiousness and care which are among the primary virtues of the modern designer of first rank.

The exhibition will continue indefinitely and is open to the public. The Avery Library is open from 9 a. m. to 6 p. m. and from 7 to 11 p. m., except Sundays.

Personals

Messrs. Zantzinger, Borie & Medary, architects, announce the removal of their offices to 112 South Sixteenth Street, Philadelphia, Pa.

Mr. Eugene G. Groves, architect, announces that he has removed his offices from 329 Gas and Electric Building to 222 Foster Building Denver, Col.

Mr. Andrew J. Thomas, architect, announces that on and after March 1, 1917, his office will be located at 137 East 45th Street, and he would be glad to receive manufacturers' samples and catalogs.

The architectural firm of Hutchison & Cutler, 312-313 Cutler Building, Rochester, N. Y., has been dissolved. Mr. Howard W. Cutler will continue the practice of his profession at the old address of the firm.

Drawing Materials

The Defiance Manufacturing Company, with offices in New York, Boston, Philadelphia and Chicago, has issued a book of some 400 pages with board covers illustrating a very complete line of drawing materials and instruments used by architects and engineers. Among the articles shown and described are transits, levels, theodolites, measuring tapes, drafting room furniture, drawing instruments, etc.

It is stated to be the aim of this company to supply the highest grade of goods which can be either manufactured in this country or imported. The catalog would seem to furnish a ready means of selecting needed supplies for the drafting room or office, and will be sent to architects or engineers upon request.

180°

SECOND CHURCH IN NEWTON—WEST NEWTON, MASS.

MESSRS. ALLEN & COLLENS, *ARCHITECTS*

THE AMERICAN ARCHITECT

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THE MEMORIAL WINDOW—A PLAINT

By CHARLES COLLENS

THE relation between architecture and stained glass viewed from the standpoint of the architect might more fittingly be styled "The Memorial Stained Glass Window and the Atrocities Which It Can Commit." And yet it is hardly fair to limit the blame for this entirely to the stained glass men. Heaven knows that after we had graduated from the charming influence of the Early Colonial, ecclesiastical architecture, in this country, has many crimes to account for, including a deplorable lack of knowledge of the first principles of stained glass.

What the state of mind of our predecessors must have been which enabled them to worship in the churches which the architects (accent on the "ch") and builders of the Dark Ages of the 19th Century produced, is something which only a psychologist could explain. I can remember as a boy sitting in a church in Cleveland where the pulpit came high up against a blank wall, on which in order to enhance the beauty and depth of the "edifice," as it was called, the "Art" Committee had caused to be painted a deep chancel with columns in perspective running hundreds of yards back into space with wonderful stained glass windows casting purple shadows in all directions. This is typical of the conditions which existed during the horsehair reign of the Early Pullman and Late Wagnerian dynasties.

After these well-meant but unsuccessful attempts at art, we were next confronted with the terrible scourge of the practical church builders who developed fearsome plans by which all one side of a church could be made to disappear and throw Sunday School and everything else into one room with circular seats, sloping floors and all the accessories that go to make up a first-class moving picture theater. The man who invented the Akron plan for churches may have a niche prepared for him in Heaven somewhere, but he certainly failed to advance the cause of ecclesiastical architecture except by a process of elimination. We also had to pass through a bad case of Romanesque, introduced by Mr. Richardson, who was a great man in his time, but whose imitators failed to equal him in genius. Twenty years ago Trinity Church was voted the finest church in America, but I doubt if to-day it would even be placed among the foremost. This fact is due to the work of a group of younger men led by a few of their elders, such as Mr. Upjohn, Mr. Renwick and Mr. Vaughan, who have become so well trained in the highest expressions of ecclesiastical art as to give great promise of wonderful results and the hope that our churches will ultimately become our highest architectural achievements. This result has been further aided by the increased knowledge and education of the public, which is now demanding something more ecclesiastical, more ritualistic and more beautiful than we have been accustomed to.

What I have said about architecture is true also of the art of stained glass in this country—if it can be called an art until within a few years. And herewith begins the terrible tale of the memorial stained glass window, for while "churches may come and churches may go, the memorial stained glass window goes on forever." Our firm has had the good or

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bad fortune to reconstruct a number of churches and in practically every case have been confronted with the awful problem of these memorials. Whatever improvements are made, structural or otherwise, are always done with the understanding that the windows must remain. It has sometimes seemed almost necessary to organize an "Order of Stained Glass Gun-men" bound by the most terrible oaths secretly to do away with the stained glass horrors which have obstructed our attempts at improvement. There is one church here in Boston with a Great Transept Window, the eyesore of every worshipper, but which cannot be eliminated because of the deed of acceptance, and because the donor took the added precaution to provide extra pieces of all the various colors entering into the window so that if any piece ever became broken a new piece could be installed. Another Boston example, Dr. Edward Everett Hale's old church, while belonging to an isolated type of architecture, would not be so very bad if it weren't for the unfortunate mixture of glass which it contains. Hardly any two windows are alike, either in tone or scale, and the whole interior is dominated by a tremendous opalescent angel flying through space which would detract my attention from any peaceful communing. I could name any number of similar examples. In fact, there is scarcely one of the older churches extant which has not this insidious growth somewhere in its anatomy.

Do not think that I am decrying the memorial window as such. Like fire, it is a good servant but a bad master. Nothing can be more beautiful or a greater aid to the architecture of a church than a fine window. Anyone who has traveled abroad and seen the wonderful colors and compositions in the French cathedrals, or the clearer, more silvery tones of the English work, cannot fail to be tremendously impressed with all that stained glass can mean if handled by real artists. Just as architecture passed through the awkward age in this country, so did stained glass. First we went through times when the windows were made in great blocks of crude colors looking more like oil cloth than anything else—when the drawing was atrocious and the compositions poor. Again came periods ruled over by men who were artists in their way, but who failed to grasp the true meaning of stained glass, which is never to try and paint a picture. Their windows still have a certain appeal for the untrained client, but they are not ecclesiastical and fortunately are passing out of vogue. An opalescent stained glass picture is far more out of keeping in a church than some of the earlier and cruder attempts.

Then again there are those who have spoiled good Colonial churches by introducing stained glass into the window openings. There is a fine stone Colonial church near Boston Common which, to my mind, has been entirely ruined by a series of opalescent stained glass picture windows. The "artist" even removed all of the muntins, which are the first elements of Colonial fenestration, so that the effect is entirely foreign to the architecture in every sense of the word. How much more dignified are the clear glass openings of the Park Street Church or St. Paul's. To put stained glass in either of these churches would be like putting a loud colored head dress on a Quakeress.

Almost all of the sins above enumerated were due to two causes. First and foremost was the lack of skill and knowledge on the part of the stained glass men of the past, and, secondly, the lack of foresight on the part of almost all of our church trustees or vestries. Time and again in building a church we have urged in the strongest terms on the committee the absolute necessity of passing some kind of a resolution or framing some code of action which would bind the church to its future policy with regard to the glass. Usually, like a man making a will, they put it off until too late, and then get caught, or else they get caught and haven't the backbone to refuse an inappropriate memorial. A short time ago we completed a small Colonial church. After we got through an influential member of the church presented it with an opalescent chancel window. We protested all we could, but the vestry hadn't the courage to refuse and so the church

to-day stands spoiled, in our opinion. We recently remodeled a fine old Gothic church in Connecticut where a series of very beautiful windows are gradually being installed. Several years ago someone presented an opalescent memorial horror to the church which confronts us halfway down the aisle. We don't know what to do with it, as the donor had it installed where she could sit and see it every Sunday. This is one of the cases where we are anxiously awaiting the formation of the above-mentioned "Order of Stained Glass Gun-men." Sometime ago we were asked to rebuild the chancel of a church in central New York State. All was clear sailing except for an oil cloth stained glass window of "St. John" which the congregation had looked at so long that they had become partially hypnotized by it, and the only thing to do was to promise that "St. John" with his "beeutiful" face should still gaze up into space while jotting down with a quill pen on a long parchment roll his impressions of heaven. But we took "St. John" away and broke his great expanse of red garment into many small bits, and placed him on a new background of grisaille and put a little masculinity into his face and he is now fairly presentable.

Another thing that the stained glass men of the past didn't take into consideration was the adequate lighting of the church. An important church in New York which we attempted to better had its windows so choked with (we won't mention names) windows of so dark and muddy a tone as to make it necessary to light the lights even on a sunny day in order to find our way about. We had to take away the organ and open up the west window to brighten the church, because of these stained glass memorials which couldn't be moved. I could name any number of churches that are afflicted in this same way.

Nowadays, however, our stained glass men study the church with careful thought for light values and so grade their backgrounds and grisaille as to attain a nice equilibrium between the north and south lights, the proper softening of the chancel windows and the greater lighting opportunity of the west window.

If these church committees would only start out with a policy, as I have said before, how much better off we should be. If possible, they should always map out beforehand a fixed scheme for the church, assigning a subject to every window. Then they should determine on their stained glass maker either by looking around at the very best work which is now being done, or by paying for a small sample light to be made by three or four of the best men of to-day, thus making a selection. They should either allot the entire work in the church to one man or certain parts to different men. Personally, I can see no harm in letting one man do the chancel window, another the west window, another the aisle windows, and still another any chapel or baptistry windows—provided, of course, that all of the glass is of the same period, and that a general scheme is carried out. But first let the church appoint an art committee made up of people who know and not who have given freely, and let the architect be a permanent member of this committee, and perhaps the succeeding generations who worship in that church will bless those who had the good sense to make such wise provision.

There is another matter which should be carefully studied and that is the temporary glazing. This should be so softened by stippling as to exclude the direct sun rays, and have just enough color to recall the stronger glass of the permanent windows, and bind them together if separated.

Many churches are doing away entirely with the memorial windows and installing grisaille of a fine quality to act as the permanent glass. This can be seen at its best in St. Thomas' Church, the Chapel of the Intercession or the new Synod Hall in New York.

I am afraid that I have been knocking the stained glass men pretty hard. A few years ago we didn't have any stained glass artists in the country, and any glass worth looking at came from abroad. Now we are at last fortunate in having a few younger men who have served their apprenticeship abroad and who know

what real stained glass is. Some of them understand how to make grisaille with its geometrical pattern, its bits of sparkling glass and its mosaic effect. Others understand how to produce the rich deep coloring such as we see at Chartres or the more delicate silvery glass of the English Fifteenth Century period. And with this has come also the mastery in the use of the lead lines, and in drawing those charming mediæval faces, and hands, which are so truly filled with ecclesiastical feeling. But above all, they know how to make a window an object of real decorative value and not an opalescent picture. Such men are now ready to co-operate with the architect in producing a combination in which the stained glass is proud of the architecture and the architecture is proud of the stained glass.

The Second Congregational Church, West Newton

MESSRS. ALLEN & COLLENS, *Architects*

This church presented a very interesting problem in design, as the land on which the building is placed falls away about 30 ft. in its length. This made the natural solution of the plan the location of the church at the highest point of the lot with the Sunday-school placed in the secondary location, and the parish house at the lowest level. The committee were anxious to have the tower at the front of the church, but were finally persuaded to locate the tower at the junction between the Sunday-school and the church, where it dominates the center of the construction.

The exterior of the building is made of West Townsend granite laid up in long lengths with the trimmings of Indiana limestone, except the upper part of the parish house, which is done in stucco to match the stone work in color. The roofs are of the unfading dark green slate, which forms a suitable contrast to the stone work, and blends in with the heavy foliage with which this building is surrounded.

The church proper is designed to seat 750 and the chancel arrangement is in accord with the latest developments in orthodox ritual. This church, although of the Congregational denomination, has gone so far as to have what constitutes practically an altar, although used solely as a communion table. The stone cross has formed an innovation in this type of church. The altar and reredos are very effectively lighted from the upper part of the reredos, which throws a soft glow over the stone work and the folds of the old gold reredos curtain, forming a very charming focus in the general chancel effect.

At the left of the chancel is a small chapel with some very charming stained glass windows. From this chapel access is had to the Sunday-school and the rest of the parish house.

The interior is finished in very soft quartered gray oak, and the walls are throughout tinted in the Caen stone color. The carving in the chancel was done by Mr. Kirchmeyer and is well worth studying.

The organ is a very powerful instrument installed by Casavant Freres, and has a console which controls also the organ in the chapel. In addition to this there is an echo organ at the front of the church, so that very beautiful musical effects can be produced.

The church was built at a total cost of about $160,000, which, considering the large amount of finished stone work and the high quality of the construction, is a very satisfactory showing.

The Mead Memorial Chapel

MESSRS. ALLEN & COLLENS, *Architects*

The Mead Memorial Chapel at Middlebury College, Middlebury, Vermont, was dedicated last June. It was the gift of ex-Governor Mead of Vermont. The chapel is located at the highest point of the campus, and is flanked on one side by a new dormitory. There may eventually be a corresponding dormitory on the opposite side, which will complete the setting

SECOND CHURCH IN NEWTON
WEST NEWTON, MASS.

MESSRS. ALLEN & COLLENS, *ARCHITECTS*

of the building. At present there is no foliage about the chapel, which gives the building a rather severe outline. This will, however, be corrected, as the general scheme of setting is gradually carried out.

The outside of the chapel is built entirely of Vermont marble, except the tower, which is of wood with a copper spire. The college originally had under consideration the possibility of a Gothic building, which would have been inappropriate in the surroundings. The architects compromised with them by carrying out the interior in Colonial detail, but with a dark wood ceiling and with dark woodwork throughout. The effect is somewhat characteristic of the Gothic, although the detail is different. The photograph of the interior shown in this issue is unfortunately taken so high up as to give the ceiling an effect which it does not produce in the actual work.

It will be noted that although the church is a distinct orthodox building the chancel arrangement has been followed and is very highly commended by the college as conducive to a distinctly religious atmosphere.

The interior woodwork is birch, stained with an old English stain, producing a grayish brown effect rather than the customary mahogany tone.

There has been installed in the tower a complete chime of bells, which made it necessary later to place louvres in the lower window openings of the tower instead of the glass originally designed, a detriment to some extent to the looks of the tower.

The Bowdoin Gymnasium, Brunswick, Maine

MESSRS. ALLEN & COLLENS, *Architects;* MR. FELIX A. BURTON, *Associate*

This building consists of two distinct features, the gymnasium part and the Hyde Athletic Building. As most of the buildings at Bowdoin College are in simple Colonial style, the architects attempted to carry out the same general line in the construction of the gymnasium. It became a difficult problem, however, to relegate the athletic building to its necessary dependency on the gymnasium proper, in order to give it a scale which would not out-balance the front building. This was done by making use of the running track to divide the building into two stories, which reduces the scale to a large extent.

The outside is built of water struck brick with granite trimmings, and monitors were used in place of skylights, owing to the weather conditions at Brunswick.

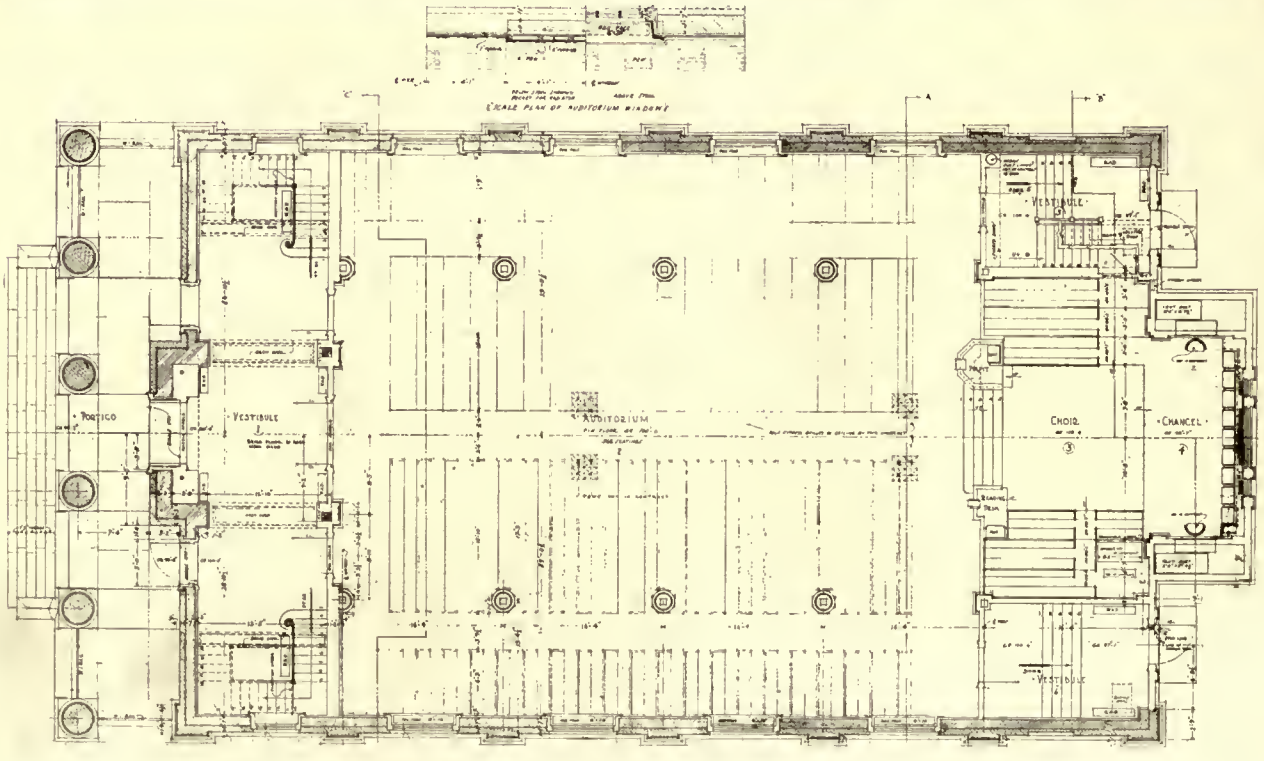
The inside is finished in a very simple manner, the brick walls throughout being laid up in white cement and left unfinished. The floor of the running track is of a clay composition, which makes it possible to have outdoor sports and is not productive of dust.

At the back of the gymnasium is the gallery, as will be seen in the photograph, containing the various trophies won by the athletic organizations of Bowdoin College.

This building was built at a total cost of $100,000, which gives a very low cubage for the size of the building.

MEAD MEMORIAL CHAPEL, MIDDLEBURY COLLEGE, MIDDLEBURY, VT.

MESSRS. ALLEN & COLLENS, *ARCHITECTS*



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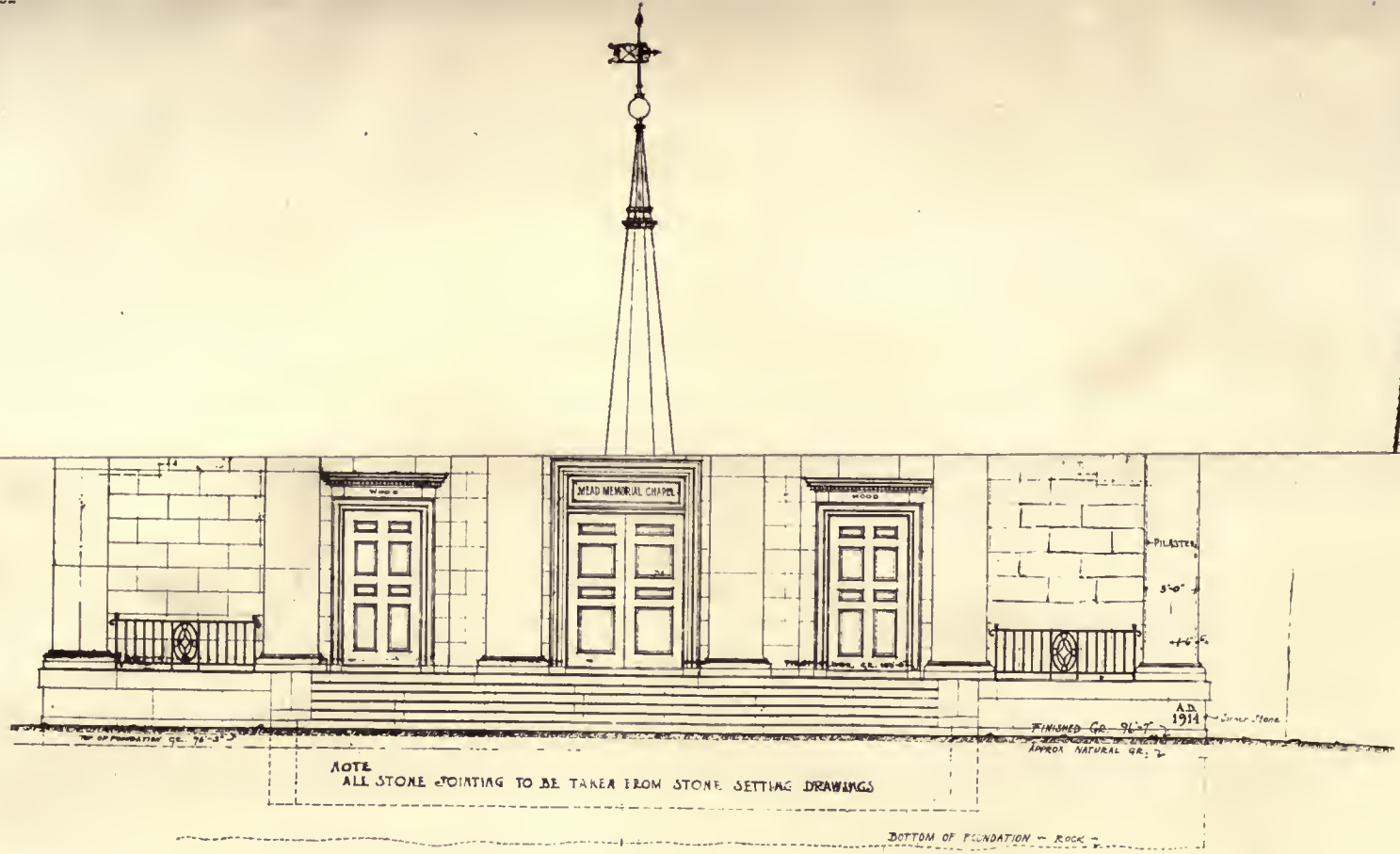
MESSRS. ALLEN & COLLENS, *ARCHITECTS*



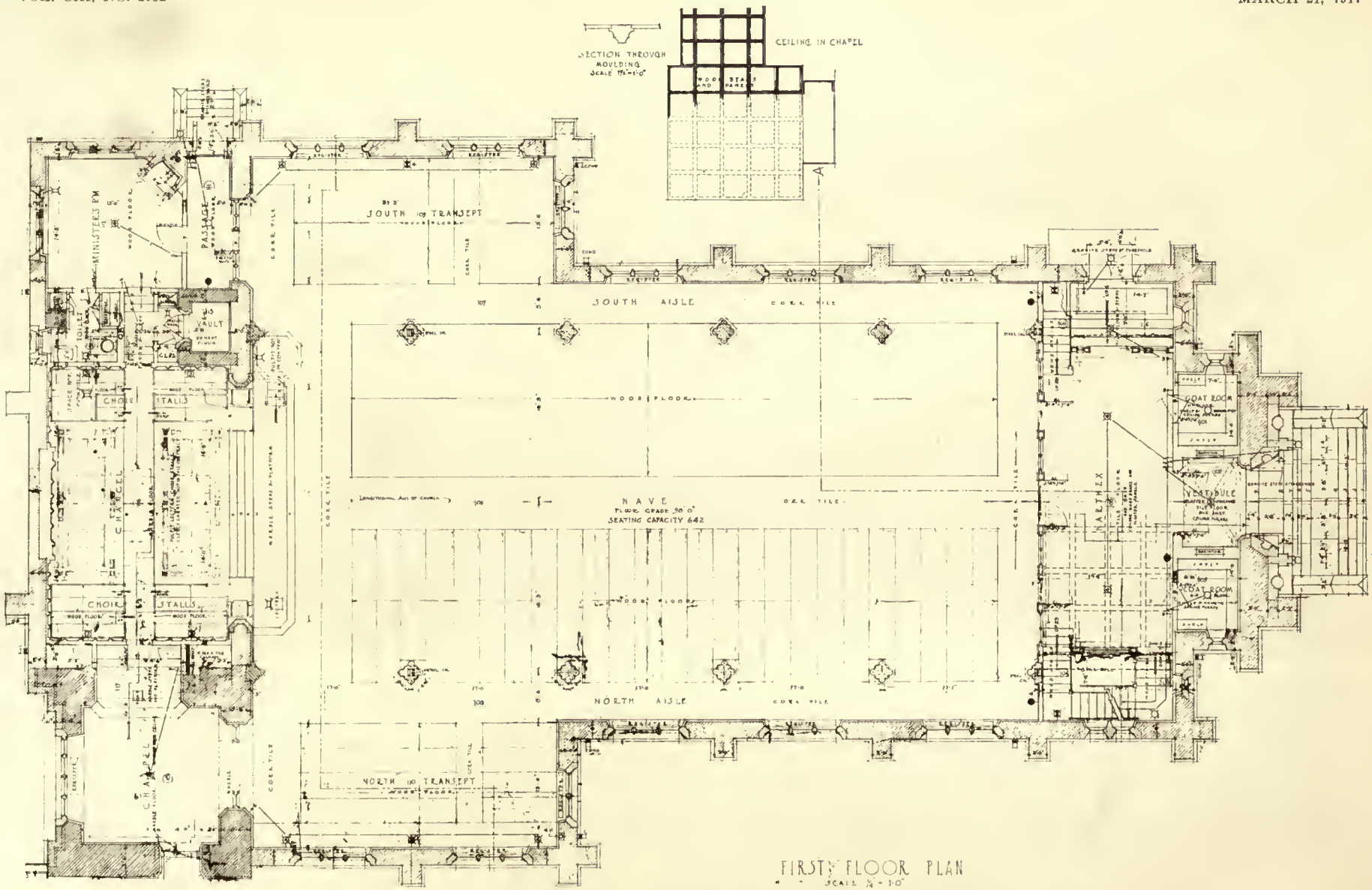
MEAD MEMORIAL CHAPEL, MIDDLEBURY, VT.

MESSRS. ALLEN & COLLENS, *ARCHITECTS*

SECOND CHURCH IN NEWTON, WEST NEWTON, MASS.

MESSRS. ALLEN & COLLENS, *ARCHITECTS*

(*For other illustrations see text pages*)



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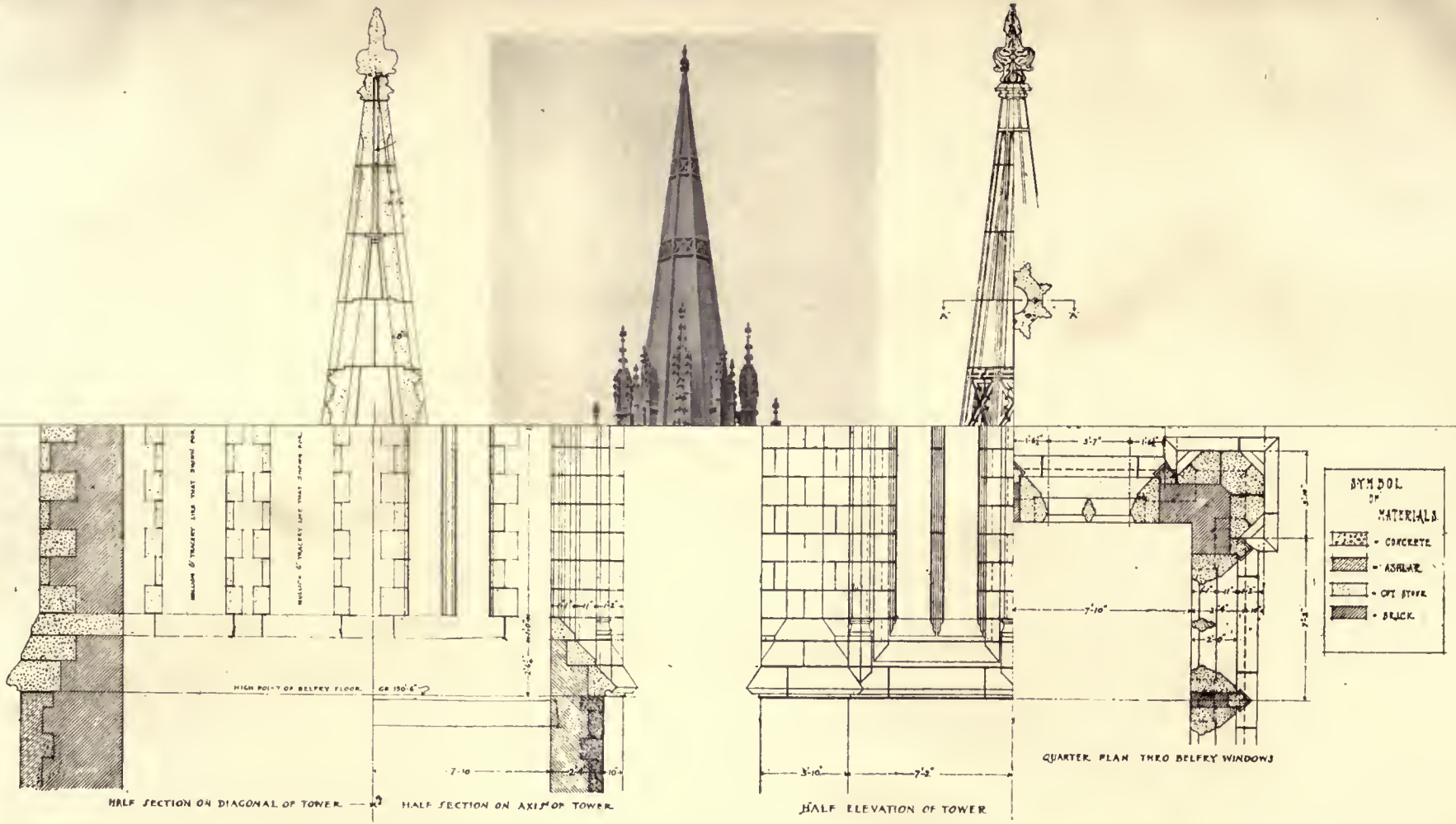
MESSRS. ALLEN & COLLENS, *ARCHITECTS*



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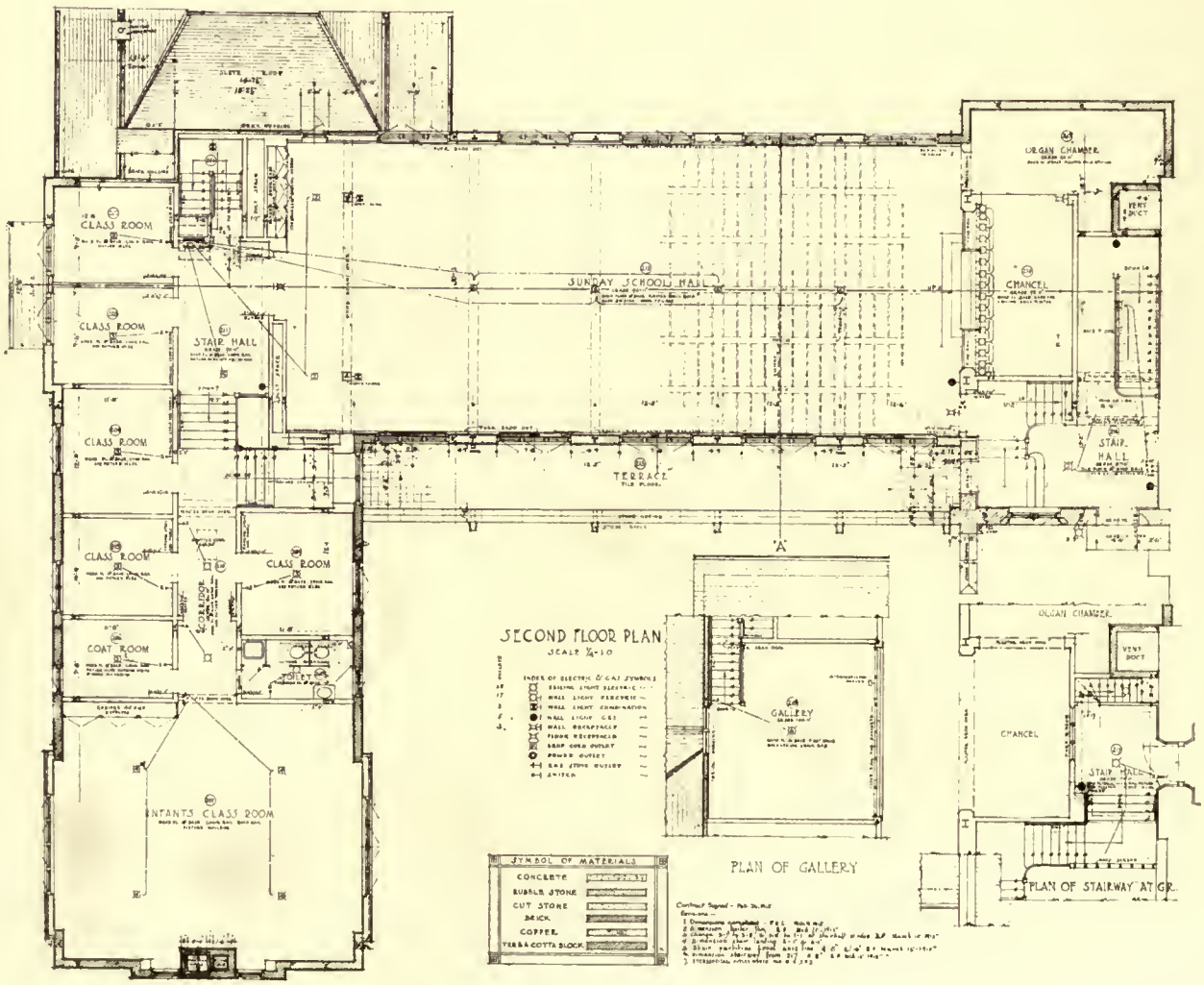
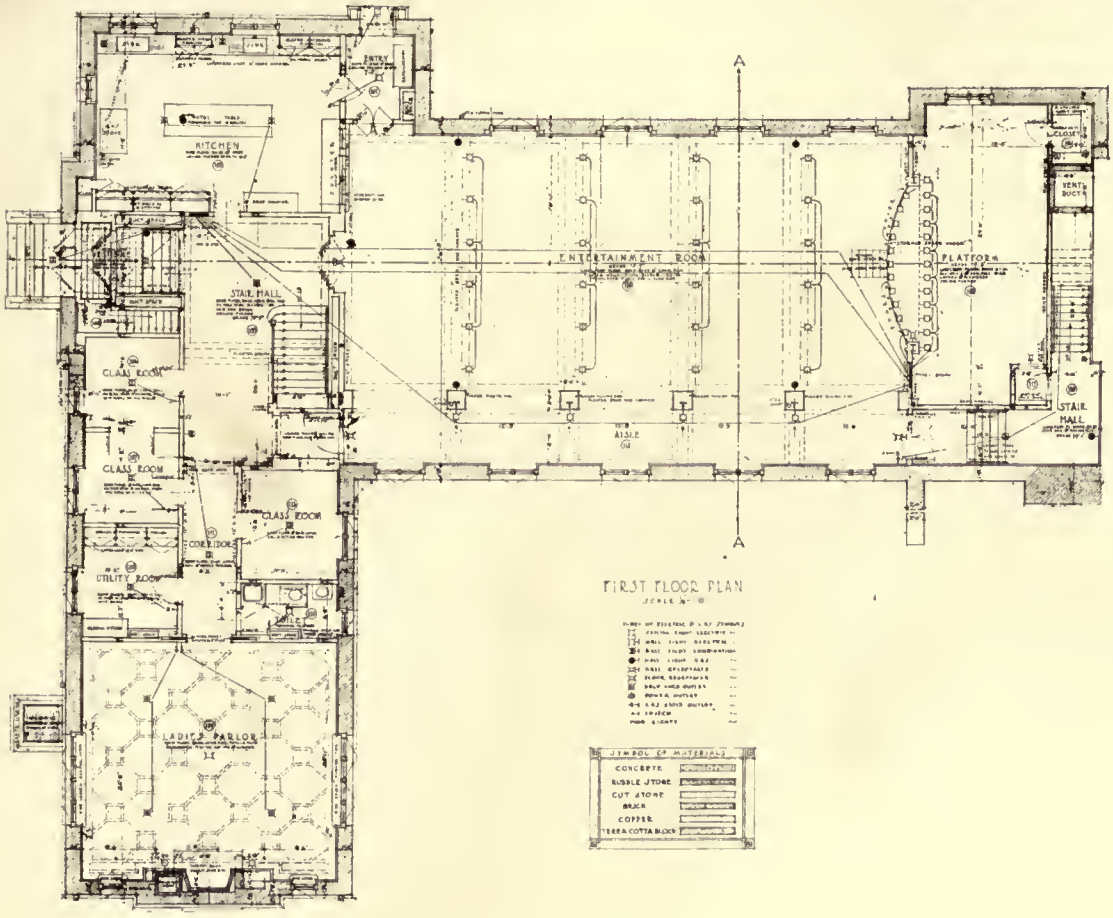
MESSRS. ALLEN & COLLENS, *ARCHITECTS*

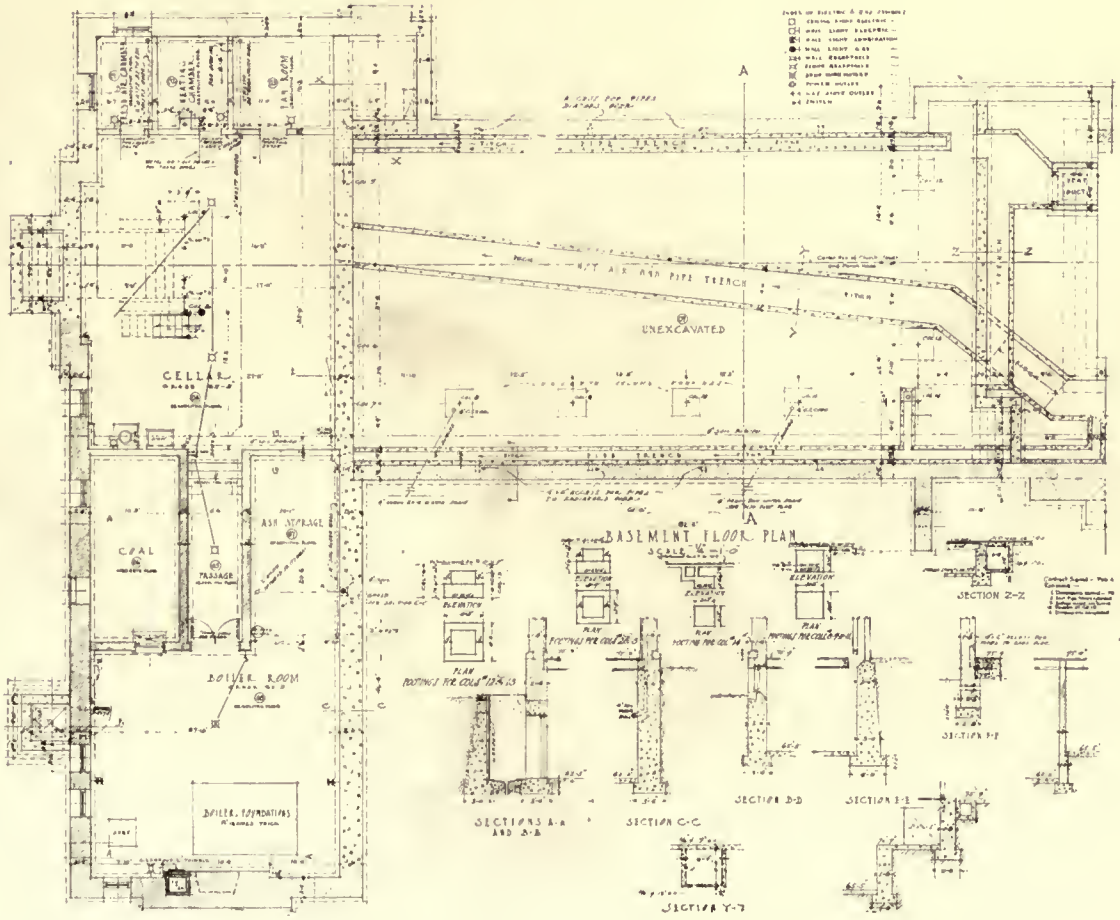


PARISH HOUSE

SECOND CHURCH IN NEWTON, WEST NEWTON, MASS.

MESSRS. ALLEN & COLLENS, *ARCHITECTS*





PARISH HOUSE

SECOND CHURCH IN NEWTON, WEST NEWTON, MASS.

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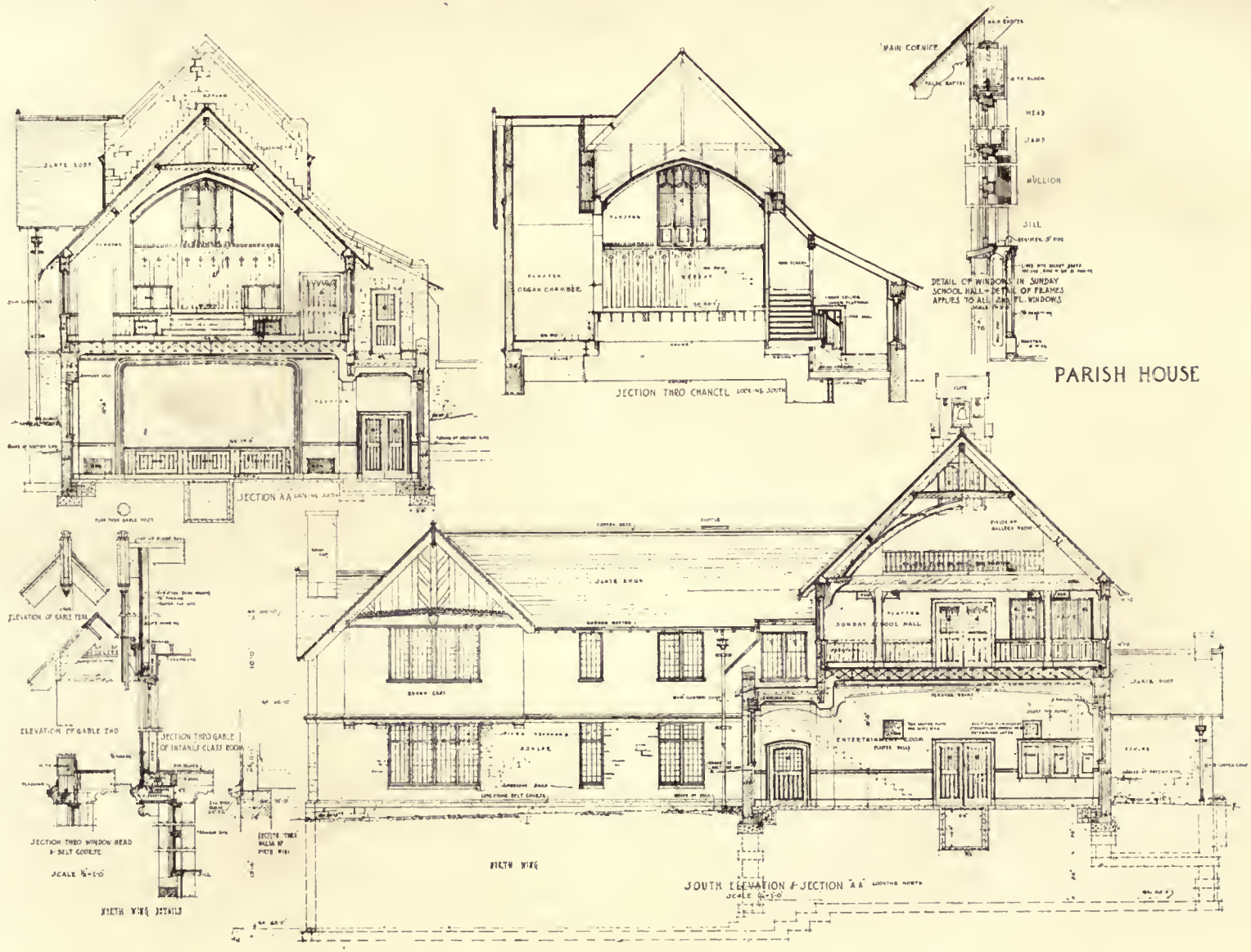

PARISH HOUSE
SECTION THRO CHANCEL
DETAIL OF WINDOWS IN SUNDAY SCHOOL HALL
SECTION A A
SOUTH ELEVATION & SECTION A A
SIXTH WIKE DETAILS

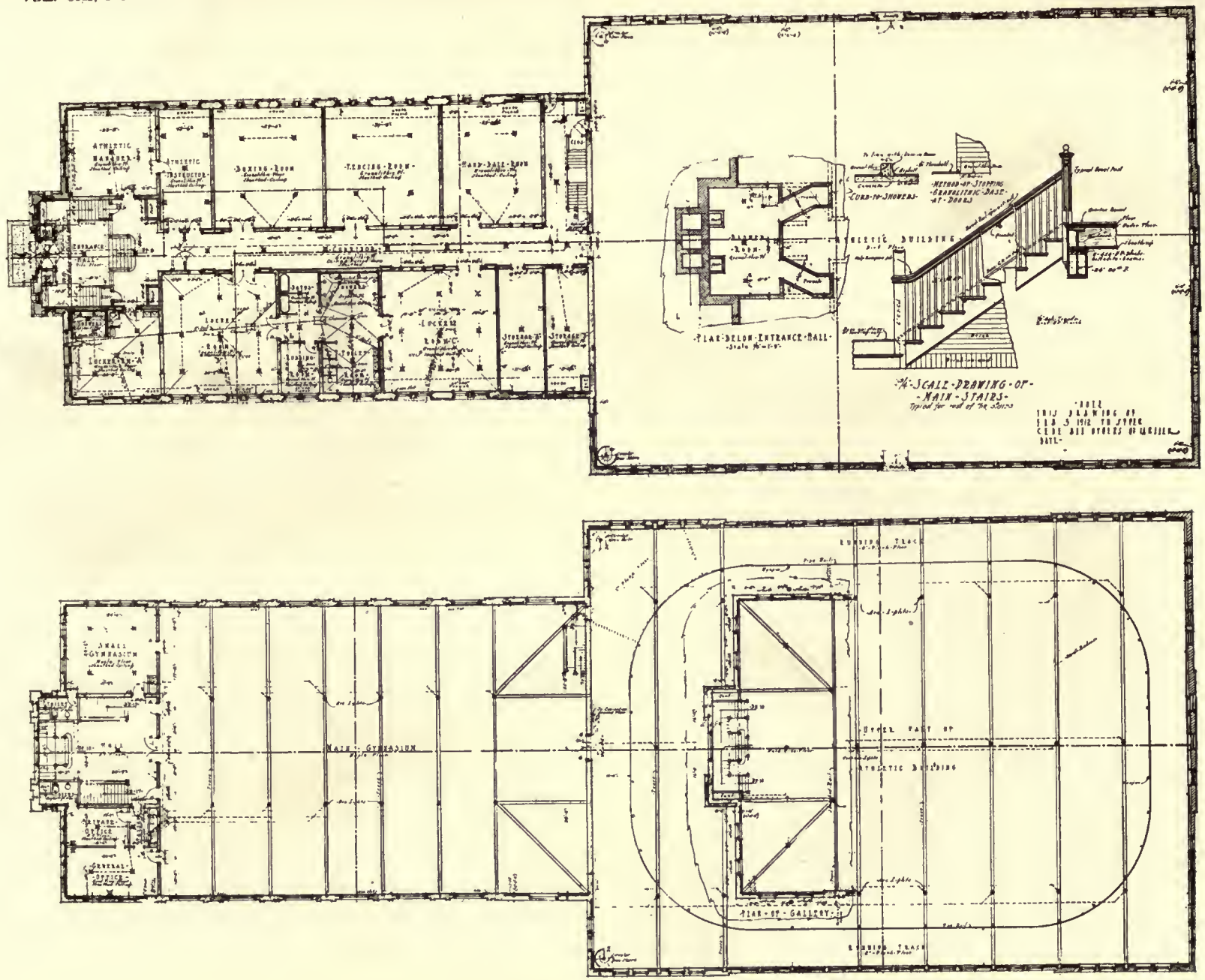
PARISH HOUSE

SECOND CHURCH IN NEWTON, WEST NEWTON, MASS.

MESSRS. ALLEN & COLLENS, *ARCHITECTS*

GYMNASIUM, BOWDOIN COLLEGE, BRUNSWICK, ME.

MESSRS. ALLEN & COLLENS, *ARCHITECTS* MR. FELIX A. BURTON, *ASSOCIATE*



BOWDOIN COLLEGE GYMNASIUM, BRUNSWICK, ME.

MESSRS. ALLEN & COLLENS, *ARCHITECTS* MR. FELIX A. BURTON, *ASSOCIATE*

GYMNASIUM AND INTERIOR ATHLETIC BUILDING

BOWDOIN COLLEGE GYMNASIUM, BRUNSWICK, ME.

MESSRS. ALLEN & COLLENS, *ARCHITECTS* MR. FELIX A. BURTON, *ASSOCIATE*

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VOL. CXI MARCH 21, 1917 No. 2152

THE PLACING OF FINE ART MOTIVES

AS a people attain that higher degree of culture that demands more elaborate decoration in homes and public buildings, in parks and cities, there comes a need for a more careful consideration of the use and placing of objects of art—notably pieces of painting, sculpture and permanent monuments. In considering the use of such embellishments it is obvious that the effect produced depends quite as much upon the setting and propriety of site chosen for an object of art as upon the excellence of the work itself. Too often are seen unfortunate misuses of art motives, very admirable in themselves, but incongruous due to a lack of co-operation of architect or landscape designer with sculptor or painter.

In the greatest epochs of artistic progress, sculpture and painting were a means of architectural decoration, of public instruction and for the moral elevation of the age. Each object of art had its location, purpose and environment; was a part of a whole and in harmony with the other elements. As such it was given its proper distinction and necessary light. Especially is this seen in the works of Phidias, in the sculptures of Gothic cathedrals or in the Medici tombs of Florence.

In this country, too many of the works of art are crowded into museums, where they are apt to lose much of their individuality. Of course, there are many objects of art secured from other eras of civilization and culture that have no modern application. These, as during the Renaissance, are often first the objects of private collections, which eventually come to enrich the public museum through the generosity of the owners. The museum is, of course, a legitimate place for them, much more so than it is for the contemporaneous work which it would seem should be created to fill some definite position if it is to rank as a living piece of art.

In American cities, especially throughout the Middle West, so few attempts at municipal decoration are seen that one is apt to welcome and be slow in criticising any indication of embellishment. If a city can afford to treat its people to the view of a work of art at all, it should be had in an appropriate place, with suitable environment and at the time when it can be enjoyed to the fullest extent. A fine equestrian statue may be a noble addition to a public square or a crowded thoroughfare but would seem out of place in the midst of pink geraniums in a horticultural park.

Every designer of plans knows of the value of sculptured monuments as points of accent, as entrance motives and as focal points. As such, there is a great demand and it requires only that some thought and discretion be used in the selection of the motive.

The city plan of Washington constitutes an admirable example to the other cities of the country of the use that can be made of the sculptor's art in city planning. Here many of the monuments may be severely criticised from an artistic standpoint, but much has been done to enhance them by natural setting and advantageous viewpoints. In New York City, handicapped as it is by a plan that affords few possibilities for relief from the city's congestion, pleasing re-

liefs are given by the studied placing of St. Gaudens' splendid statue of Sherman at the Plaza and of this master's smaller statues, such as that of Peter Cooper at Cooper's Square.

Again, much has been done in the great expositions, particularly in the Panama-Pacific exposition of 1915, to show the impressive effects that may be obtained by the proper combination of architecture, sculpture and horticulture. The beauty of marble is disclosed by a background of dark evergreens, while bronzes frequently display unexpected charm when placed before a fitting background of architecture. In all highly developed park designs, there would seem to be endless occasions for a great variety of sculptural features, while the use of ornament and color rightfully belong to the practice of architecture.

And in architecture is the assistance of painting and sculpture most welcomed. Although an architectural work may be designed complete and beautiful in itself, tympanum, frieze, panel and niche all invite further embellishment by the representation of the beautiful. The work of the sculptor and painter when used to embellish and enrich architecture ought, however, always to be subordinated to that of the architect so as not to disturb the unity and harmony of the whole. It must be suited to the places created for it, corresponding to the intellectual purpose of the building, conforming to it in scale and style and harmonizing with it in color, line and relief.

Only with the four great physical arts of decoration — architecture, landscape horticulture, sculpture and painting— working in harmony will there be realized the ideal of civic design.

RALPH FANNING.

SECOND CHURCH IN NEWTON—WEST NEWTON, MASS.
MESSRS. ALLEN & COLLENS, *ARCHITECTS*

(For other illustrations see plate form)

A GROUP OF STATUARY MAY BE USED AS AN ACCENT IN PLAN

A BRONZE ENHANCED BY AN IMPOSING SETTING

AT LEFT:—

A GEM OF SCULPTURE ENRICHED BY A STUDIED SETTING

MONUMENTS ARE SOUGHT AS FOCAL POINTS IN A CITY'S PLAN

A PLEASING COMBINATION OF SCULPTURE, ARCHITECTURE AND HORTICULTURE

EXAMPLES OF STATUARY SELECTED BY R. S. FANNING TO ILLUSTRATE RELATION OF WORK TO ENVIRONMENT

Architectural Refinements in Modern Buildings

The *Brooklyn Museum Quarterly* has published recently some interesting notes recording the introduction of certain architectural refinements into buildings lately erected or in course of erection. Two examples are cited—one in America and one at Newport in Ireland. These refinements are stated to be based on the theories advanced by Mr. William H. Goodyear and illustrated in the Brooklyn Museum collection of architectural photographs which were exhibited at Edinburgh in 1906 and at Dublin in 1914. The architect of the Newport building—a church—is Mr. R. M. Butler [*F.*], editor of *The Irish Builder.* Among the refinements introduced are the sloping upward of the floor of nave and aisles; the convergence in plan of the nave in its length from west to east; variations in dimensions of the bays of the nave arcade; and the widening refinement, "consisting of an outward vertical divergence of the walls of the nave, amounting to 6 inches to the side."

A second example is at the Swedenborgian church at Bryn Athyn, near Philadelphia, where Messrs. Cram & Ferguson have employed curves in plan in the alignment of the arcades of the nave. Mr. Cram gives the following details: "The floor slopes upward from the entrance of the chancel. The nave piers are on an alignment slightly concave to the center of the nave, so that near the second bay the church is 14 inches wider than it is at the ends of the nave, and the 'horizontals' of the cornices, parapets, etc., above the arcades, are not horizontal at all, but are slightly convex in the vertical planes, thus exhibiting bends in elevation, with a total deflection of about 6 inches to a side. This bend of the horizontals in the vertical plane begins in the line of the arcade capitals. The second crossing arch is a foot higher than the first. At the entrance to the sanctuary the vertical lines are inclined outward 2½ inches to a side in a height of 25 feet. The spacings of the piers are all varied, not only as regards the relations of each successive arcade on a given side of the church as compared with the arcade preceding or following, but the arcade spacing is also varied as compared with the arcade directly opposite in the opposite line. There is also a bend in plan, convex to the exterior, in the façade; the sides of the façade corresponding to the aisle widths slant backward in plan, so that the angles of the façade are 6 inches back of a line parallel with the central front. In a great number of other particulars, persistent effort has been made to break up and dispel the monotonous appearance of mathematical and geometric regularity."

A third example is to be found in the new buildings of the Massachusetts Institute of Technology, described by the architect, Mr. William Welles Bosworth, of New York City, in THE AMERICAN ARCHITECT for the 26th July last. Mr. Bosworth mentions that the sky-lines of the various courts "are all curved, following out the theories revived so vigorously by Professor Goodyear. The columns of the main portico are also set on a forward curve on plan, as may be seen in one of the illustrations."

The Anarchy in Architectural Design

A correspondent to the *Journal of the Royal Institute of British Architects* commenting on a recent address by Professor Lethaby, in which he referred to the difficulty in "getting around the corner of conflicting styles," writes, in part, as follows:

"Never in the history of architecture, during the past ten thousand years or more, has there appeared such a hybrid jumble of design, such a blind groping after right method as has been seen in England during the last hundred years or so.

"Up to that time art was all of a piece—or at any rate it is sufficiently accurate for the present purpose so to consider it. Since then, however, architects have not been able to handle, much less weave into an orderly system of thought, the plethora

of conflicting ideas and tendencies which have arisen. This somewhat startling fact appears to be accepted by the majority of architects not as a catastrophe but as part of the inevitable scheme of things, about which we must not make much pother, or we should be regarded as cranks, to the detriment of our pockets.

"This attitude is not merely thoughtless and mistaken, it is more serious, as Professor Lethaby said, 'It is a question of survival'; for, although he used these words more especially with reference to the 'advertising plague,' I suggest he would quite as heartily apply them to the 'internal anarchy of style from which we suffer.'

"Investigations into the fundamental causes leading to the present social condition of the country have already been made, and are being made, from the standpoint of economics, etc. This is to be expected, as the economic cause precedes æsthetic reaction; but the time has surely arrived when we should strive to obtain a more precise mental articulation than we have hitherto had as to the fundamental causes which have led to our present æsthetic condition, seeing that these causes present themselves as a fairly complete chain dating back to the seventeenth century, culminating with the Gothic revival, the history of which shows how unable the architects of the last century were to grasp the metaphysical truth that 'you cannot put your foot into the same steam twice.'

"By conferences, discussion, and a considerable amount of thinking we ought to be able in course of time to evolve a body of doctrine very much sounder in its ultimate basis than the present muddlement —doctrines not to be codified into hard formulæ, but held as spiritual convictions governing decent architectural behavior. Not till then shall we be in a position to hand on to pupils and students of architecture even an elementary theory of æsthetics based upon some sort of reasonable foundation; or shall we be able to rid ourselves of the harmful incubus of the nineteenth century and speak with a voice sufficiently united and convincing to influence the world of men and things."

New Board of Standards for New York

Mayor Mitchel has appointed seven members of the Board of Standards and Appeals to take the place of the old Board of Examiners. The new board will have jurisdiction over the building operations in each of the five boroughs, which control was formerly vested in various departments.

The members of the new board are: Rudolph P. Miller, a civil engineer, formerly Superintendent of Buildings of Manhattan, chairman; Daniel Sullivan, former secretary of the Bureau of Buildings, Manhattan, secretary; Lansing C. Holden, architect; William Crawford, builder; Howard C. Baird, consulting engineer; Alfred R. Kirkus, real estate expert, and Alfred J. Boulton, representative of labor.

Annual Convention, New York State Association of Architects

The Annual Convention of the New York State Association of Architects was held on Feb. 16th at Syracuse. Delegates were present from all parts of the State. The following officers were elected:

Frank H. Quinby of Brooklyn, President; Edwin S. Gordon of Rochester, Vice-President; Leon Stern of Rochester, Secretary-Treasurer.

Directors: Frederick L. Ackerman of New York, Alexander Mackintosh of Brooklyn, Albert L. Brockway of Syracuse, William S. Wicks of Buffalo.

On the first day the delegates were shown what was being done toward a new City plan for Syracuse, and an inspection was made of the University's Art and Architectural Departments.

A cordial welcome was extended to the visitors at a luncheon given by the local architects.

The Convention approved the bills for the Basic Building Code for the State and for a State Art Commission.

Resolutions condemning the location of institutions on the Croton Watershed and the location of the Washington Power House were adopted.

An effort will be made by the Associa-

tion to encourage the preservation of historical and architectural buildings and monuments throughout the State and to promote the general interest in town planning.

The Convention adopted a resolution approving the proposal made by the National Conference on City Planning that a State Bureau of City Planning be founded.

The Convention concluded with a dinner with addresses by Robert D. Kohn, D. Everett Waid, Frederick L. Ackerman, William P. Bannister, Prof. Martin of Cornell and Prof. Revels of Syracuse University.

PERSONALS

Mr. Albert Houghton Good, architect, has opened offices in the Flatiron Building, Akron, Ohio, for the practice of his profession, and desires to receive manufacturers' catalogs and samples.

Messrs. Bissell & Sinkler, architects, announce the removal of their offices to the Otis Building, Sixteenth and Sansom streets, Philadelphia, Pa.

Mr. R. E. Vincent, architect of Spokane, Wash., has opened a branch office at Gooding, Idaho, and will be glad to receive manufacturers' samples and catalogs.

Messrs. Furness, Evans & Company, architects, announce the removal of their offices from the Provident Building to the Franklin Bank Building, Philadelphia, Pa.

Messrs. Payne & Adams, architects and engineers, New London, Conn., have moved their offices from 81 State Street to the Barrows Building, 253 State Street, that city, and would be pleased to receive manufacturers' samples and catalogs.

SECOND CHURCH IN NEWTON—WEST NEWTON, MASS.
MESSRS. ALLEN & COLLENS, *ARCHITECTS*

Tests of Concrete in Sea Water

A paper, presented January 3, 1917, to the American Society of Civil Engineers, describes a test of twenty-four concrete specimens which were immersed in sea water for seven years. The object of the tests, as described in the *Proceedings* of the society, was to determine the action of sea water on concrete specimens of wet and dry consistencies, of various proportions of ingredients, and of different brands of cement, as well as the effect of special compositions.

The methods of mixing, analyses of the various cements, sand and stone, and the conditions of the test, as well as all other data having possible effect on the results, are stated in the paper. The information is given in tabular form where possible.

The specimens were examined at intervals of about one year, and record was made of their condition. The results of these observations have been tabulated, and show progressive deterioration of some of the specimens and remarkable durability of others. Recently, the specimens were examined with great care, and graded in the order of durability. These results are also tabulated. Independent tabulations are made of the various series of tests originally planned, to ascertain in one case the effect of wet and dry mixture, in another case the effect of rich and lean mixture, and in others the effects of special brands of cement, and of using lime, Sylvester wash, etc., with the cement.

The results are interesting, and seem to show, briefly:

(a) That the 1:1:2 mixture is superior to the 1:2½:4½, and that the 1:2½:4½ is, in turn, superior to the 1:3:6;

(b) That the wet mixtures are superior to the dry;

(c) That the effects of magnesia or alumina in varying proportions are not very marked, and follow no apparent law, although the two most durable specimens are those lowest in alumina content;

(d) That extra care in mixing produced decidedly beneficial results;

(e) That hydrated lime was of no benefit, but rather a detriment;

(f) That the addition of Sylvester wash was harmful; and

(g) That the addition of clay to the cement had a slightly beneficial result.

The deterioration occurred between high and low water, and was most marked at midtide. Above high water there was little deterioration, and the same is true, but to a less marked extent, of the concrete continually submerged.

It is stated that a careful reading of the entire paper should be made before any of the foregoing conclusions are applied.

The experiments are not sufficiently extensive to warrant drawing final conclusions in all cases, unless confirmatory evidence is available. In utilizing the results, the limitations of the tests and local conditions should be taken into account.

INDUSTRIAL INFORMATION

Isko Equipped Refrigerators

The Isko Company of New York, located in the Longacre Building, Broadway and 42d Street, New York City, has issued a folder entitled "Isko Facts," which describes the Isko refrigerating machine. It is claimed that an Isko machine can be installed in any refrigerator at what is described as a surprisingly moderate cost.

It is stated that this machine cools the refrigerator by abstracting the heat through the tinned copper ice-making coils, in which liquid sulphur is being boiled by the heat extracted from the refrigerator. Moisture abstracted from the refrigerator is deposited on the coil and freezes. Isko operates intermittently, so that this frost does not accumulate. During the standstill period the frost will melt and run off through the drain pipe of the refrigerator. The quantity of the drain is small as compared with the melting of ice and, it is stated, creates no slime because there is no vegetable matter in this frost.

In the ice-making compartment it is said to be possible in warm weather to make thirty-two cubes of ice in a day of twenty-four hours. Ice can be produced in winter only when the refrigerator is in a well-heated room. Otherwise the machine

runs but a small percentage of the time. When Isko is applied to a refrigerator large enough to hold a considerable amount of food, or when the weather is warm enough so that the machine will run from one-fourth to one-sixth of the time, ice can easily be made.

The machine works automatically. When the temperature in the refrigerator reaches a certain point the thermostat starts the motor, which runs until a predetermined low temperature is reached and then stops.

The advantages claimed are simplicity, economy, convenience and an improved sanitary condition. Copy of the folder or other desired information will be furnished upon request.

Ad-El-Ite Aniline Wood Stains

The Adams & Elting Company, 716 Washington Boulevard, Chicago, with offices also in New York and Toronto, has issued a folder and color cards describing and illustrating Ad-el-ite penetrating aniline wood stains.

It is stated that these can be furnished of the same strength and quality as before the war. They include aniline oil stains and aniline dry stains, soluble in water. The Ad-el-ite oil wood stains are ready for use and are supplied in all sizes of package from barrels to half pints. It is claimed that they have great penetrating power, are very rich in tone, giving the same effect as aniline water stain, and—it is also stated—they will not raise the grain of the finest woods.

Literature giving particulars regarding these products will be furnished upon request.

Lighting Equipment

The Macbeth-Evans Glass Company, Pittsburgh, Pa., has issued a folder illustrating lighting equipment for store lighting, in connection with a few of the stores in which this equipment has been installed. It is pointed out that lighting in the store, to be effective, should be soft and well diffused, with the elimination of all glare. This usually results in the use of fixtures equipped with diffusing glassware. The folder presents cuts of a number of units with each of which is used either an Alba or a Monax globe. These glasses, while they differ greatly in certain respects, are said to possess high diffusion and low light absorption properties.

Further information regarding Macbeth-Evans Lighting Equipment, or a copy of the folder referred to, may be had upon request.

Handy Electrical Wiring Devices

Pass & Seymour, Inc., main office and works Solvay, N. Y., have issued catalog 24, of Handy Electric Wiring Devices. Among these are shown and listed the interchangeable parts of pull sockets, key sockets, "Shurlock" (the socket that locks), and various other devices used in electric wiring and lighting.

The catalog is pocket size, contains eighty pages, and will be found useful by those engaged in electrical work. Copy will be furnished upon request.

Metal Moldings

The National Metal Molding Company, Pittsburgh, Pa., has issued a number of folders of standard size for filing in a regulation vertical file. Each folder is devoted to a single National product. For example, one takes up the subject of "Sheraduct," another "Flextube," a third, "Economy," and a fourth; "Flexsteel."

Each one of these products is so well known among architects that there is little need for description here. Architects are not, however, entirely familiar with the details of their manufacture and use and these are the features that are explained in the folders referred to. Sizes, dimensions, weights and much other data, even including list prices, are given. This information will undoubtedly prove of practical aid to the draftsman and specification writer. The folder will be sent to architects upon application.

ARCHWAY, VIA DEL COMUNE, ANCONA, ITALY

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, MARCH 28, 1917 NUMBER 2153

RECEPTION ROOM, FIRST FLOOR

HOME OFFICE BUILDING
VICTOR TALKING MACHINE CO., CAMDEN, N. J.

MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *Architects*

THIS structure dominates the great manufacturing plant of the Victor Talking Machine Co., and overlooks from each point of the compass the shops, factories, warehouses, power plants, docks and lumber yards of the concern. The east or entrance front faces a city square, and the west elevation is prominently noticeable across the river from Philadelphia. As it adjoins no other building, there is no "rear." It houses only the executive offices of the company, hence in the conception of the exterior design the architects endeavored to express the character of an Office Building for a great Factory, dignifying the good, but ofttimes abused, motifs of a factory, and toning down elaboration of detail and ornament, that might otherwise find place in a distinctly ornamental monument.

But with this somewhat nebulous and esthetic element of "character" that was infused in the design, other elements of

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a much more practical value were also required at its inception.

(1) A maximum of outside light was required. This fell in well with the esthetic element of "character" just mentioned, as it minimized the vertical solids.

(2) A complete system of ventilation was required, so that no matter how small an office might be, it must be thoroughly ventilated. This element together with (3) the decision to use indirect lighting throughout, which carried with it (4) the necessity of unbroken ceilings, affected (5) the design of the steel structure, as will be seen later.

(6) No power, light or heat were to be generated in the building. All this is

DESIGN FOR CHAIR IN PRESIDENT'S ROOM
(From the original design by the Architects)

carried some distance underground from the company's power plant.

(7) It was desired that the interior of the building have a domestic character. This idea is carried out in all public parts of the building, and in the major private offices and their reception rooms.

(8) An auditorium was desired on the top floor, capable of being used either as a complete theater or a banquet

BOOK CASE, PRESIDENT'S ROOM
(From the original design by the Architects)

hall. Therefore proper public and service entrances and exits had to be considered in reference to the needs of this floor.

(9) All floors are different, the arrangement and kind of partitions and the scheme of office sequence and clerking space being dictated by the varying types of work in the different departments. Although in the main, the broad division of head offices in the front and clerking space in the rear of the stair and elevator halls was followed in all floors, this feature necessitated a complete study of all requirements of each floor as a separate unit, with the result that no two floors have an identical mechanical or architectural layout. The design of such items as ventilating ducts, electric lighting, electrical low tension apparatus, telephones and pneumatic tubes had to be considered for the particular floor and the results incorporated in the preliminary design of the structure.

Finally (10) with all this mass of par-

ticular data in hand for the solution of the present problem, it was also necessary to bear in mind that most important fact, that any growth is but a changing of atoms; that at some future time any or all of these departments might be changed in complexion or make-up or relation to each other; that new departments might take the place of these present ones, carrying with them new requirements; that rooms might be enlarged or sub-divided; or that the location of desks in a room might be changed, even if the room remained the same. So that, throughout, all the resulting conditions were required to be not only a proper solution of the present problem in hand, but also a scheme handled freely enough to be capable of solution of the unknown future problems. This is one of the phases which differentiates the design of a home office building from that of a rentable office building erected as an investment.

The accompanying plans make a detailed description unnecessary, but it may be well to note several points. On entering the building one is not met by the cigar stand, flower shop or directory board, which hustle one into a direct chute to the elevators, but instead he gets a feeling of expansion. A wide, tiled lobby, flanked on each end by a reception room, opens into a large, square stair and elevator hall. The system is the same as in a hotel. There is no promiscuous riding up and down in the elevators and no wandering about looking for people. An entrance hall desk attendant is in close touch, not only with the desk attendant on each floor, but also with every office in the building and can state at once to the inquirer, the direction to, or the inclination toward a visit, of the person sought. This is mentioned merely as one of the points which affected the plan. In other words, instead of a place having to be found for every desk girl when

OFFICE OF ONE OF THE DIRECTORS

OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.
MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*

the building was finished, these locations were designed and the electrical connections arranged accordingly. The stair hall on each floor has the same atmosphere as the first floor entrance. On leaving the elevator one always has the sense of expansion, rather than the feeling of being crowded into a narrow space and then shot about his business. Although these stair halls are treated as so many rooms in a house and are used for waiting rooms, there also open off most of them, reception rooms more intimately considered.

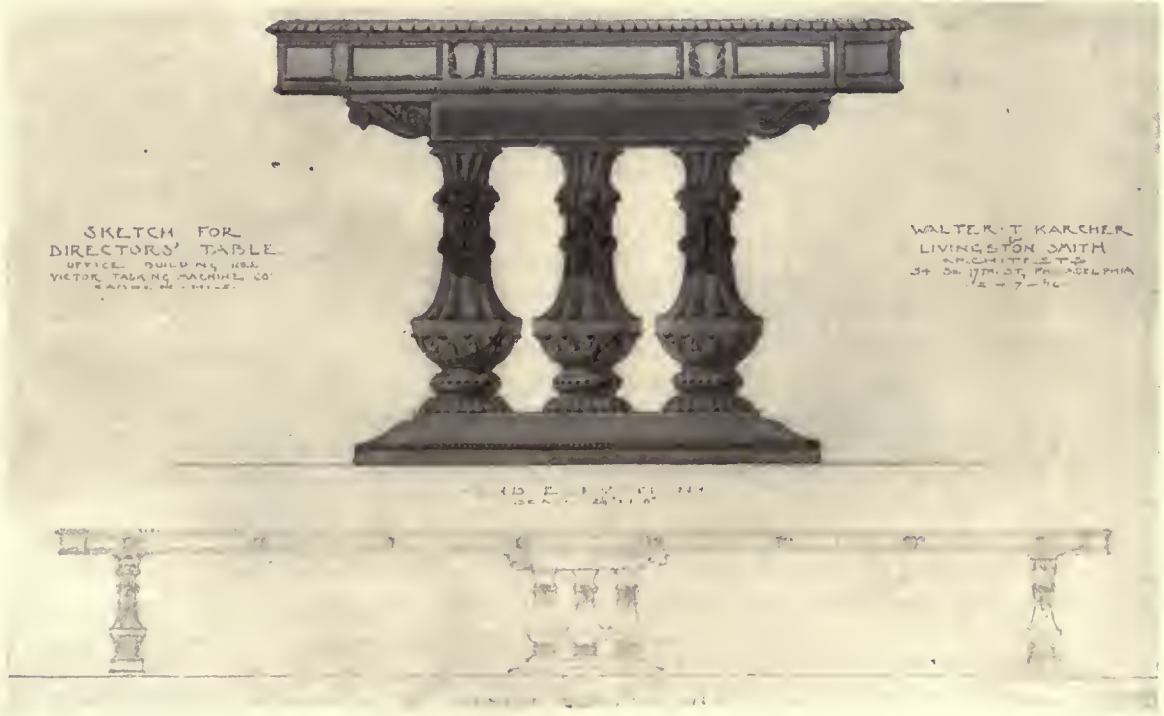
As stated above, the general system followed brought the major offices of a floor across the front of the building, all with access to the stair hall, while also opening from the stair hall are the doors to great clerking spaces, or to corridors leading to sub-divisions of clerking space. This scheme is different on the seventh, or directors' floor, and the eighth, or auditorium floor. In the former case there is no barrier at the stair hall. This opens out into a wide lobby, bisecting the whole building. This is treated in a quiet, but distinctive manner. From this open the various offices of the directors and the board room.

On the eighth floor the scheme is also different. Here the stair hall opens on the front on the girls' rest room, which takes the whole width of the building, while from the latter are reached a sick room and toilets. The rear of the stair hall is merged into the lobby of the auditorium, with its men's and women's cloak and toilet rooms.

The auditorium with its stage and other adjuncts occupies most of the eighth floor, and is intended to be used for conventions and entertainments, given by the Victor Company at frequent intervals to the different branches of its commercial family. The pantry and kitchen are a great convenience for banquets, the dressing rooms accommodate actors who may contribute to the entertainment.

DESK IN PRESIDENT'S ROOM

(From the original design by the Architects)



DETAIL OF FURNITURE IN BOARD ROOM, AND A REPRODUCTION OF ARCHITECTS' ORIGINAL DESIGN
OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.
MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*

The level maple floor makes an excellent dance floor and the moving picture equipment permits of film displays. The stage lighting with its various colored footlights, border lights, dimmers, etc., is lacking in no theatrical requisite. The auditorium serves as an excellent place for addresses and instruction to large groups of employees on subjects of business interest and the moving picture booth with its signal system permits the use of moving pictures to illustrate them as well as to furnish entertainment.

The locker and toilet rooms are on each floor. The height of the stories enabled these to be arranged as shown, the locker spaces superimposed in a mezzanine over the toilets. All have ample outside light. The toilet rooms are tiled to the ceiling.

The frames and sash of all openings are metal, those in the casement windows on the first and second floor, of bronze; and the windows are glazed with polished, wire plate glass.

All walls throughout have a coved subbase for facility in cleaning. In the stair halls and first floor entrance suite, these bases are of Champville marble. The same marble is used on the stair treads throughout and the stair risers from the first to second floor.

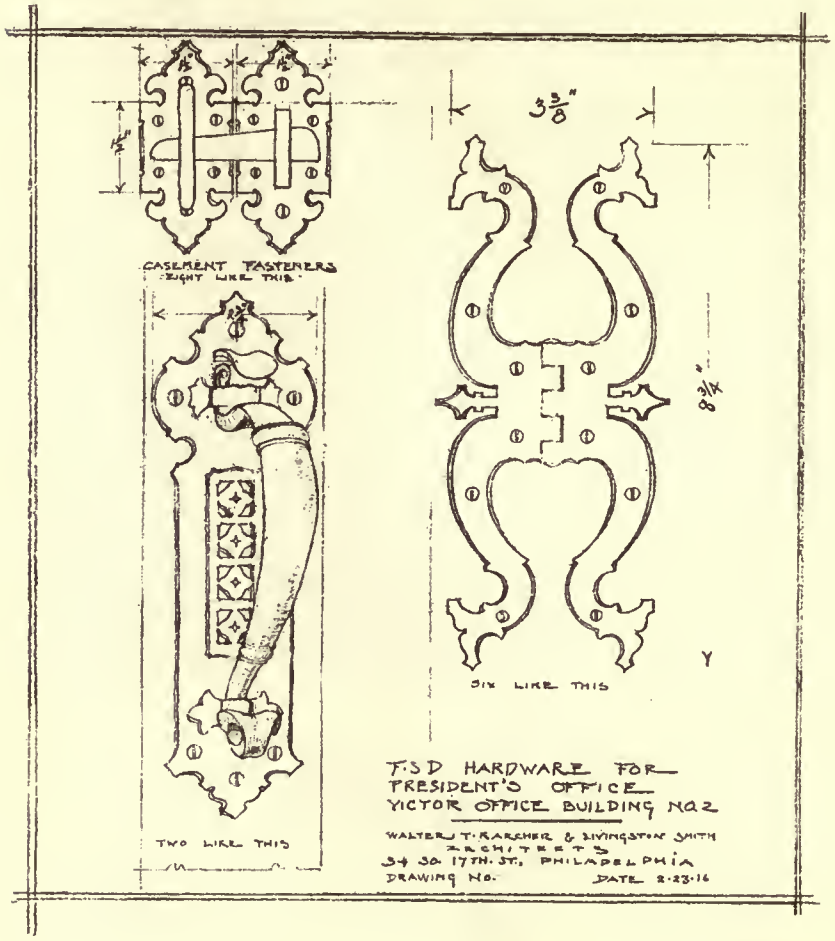
Cork tile is extensively used for flooring. This occurs in all clerical spaces and where it was an object to subdue noise. In some rooms where extreme mechanical clatter would annoy the neighboring rooms, double glazed partitions are used.

On the seventh floor, the president's room and the board room were keyed to a higher pitch of elaboration than any other rooms. They are paneled in Circassian walnut, and the furniture, also designed by the architects, is of the same material. The floors are teak. The design of the hardware for these rooms was also a product of the architects' office. In the board room an old Italian marble mantel, beautifully carved, was incorporated in the room.

The indirect lighting in the clerical spaces is of a simple type. In reception rooms, office rooms and all rooms of a special type, the detail of the architectural ornament of the particular room was carried into the design of the fixture and the etching of the glass.

The mechanical equipment was divided into separate contracts. The largest of them, the heating and ventilating, exemplifies a novel feature in the building. Of this the heating is not unusual, it being a steam vacuum system, the radiators placed under windows, in all cases behind iron grilles, and thermostatically con-

(*Continued on page* 203)



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MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*

ENTRANCE LOBBY

OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.

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HALL—SEVENTH FLOOR

OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.

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PRESIDENT'S OFFICE

OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.

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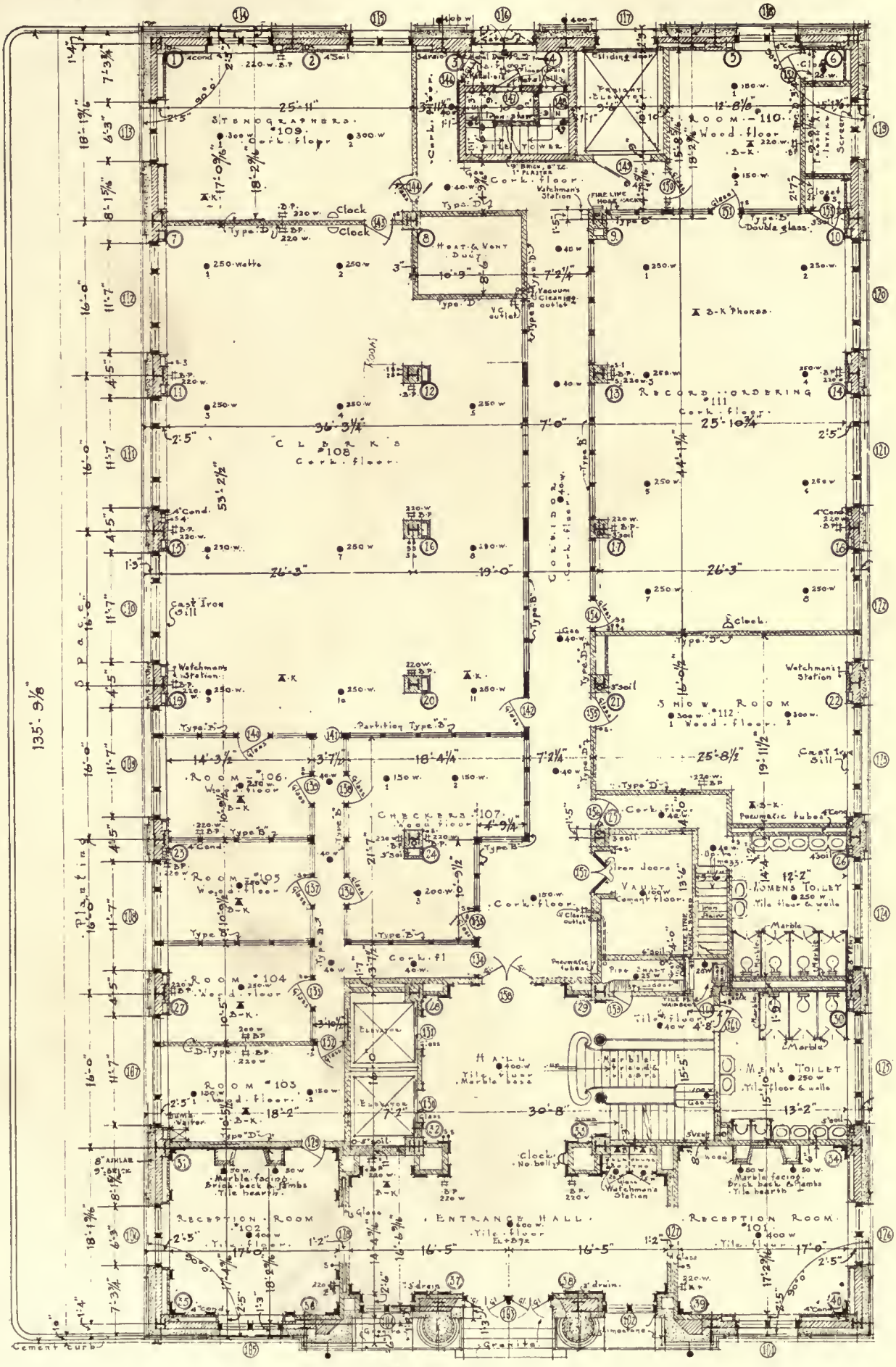
DIRECTORS' BOARD ROOM

OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.

MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*



FIRST FLOOR PLAN

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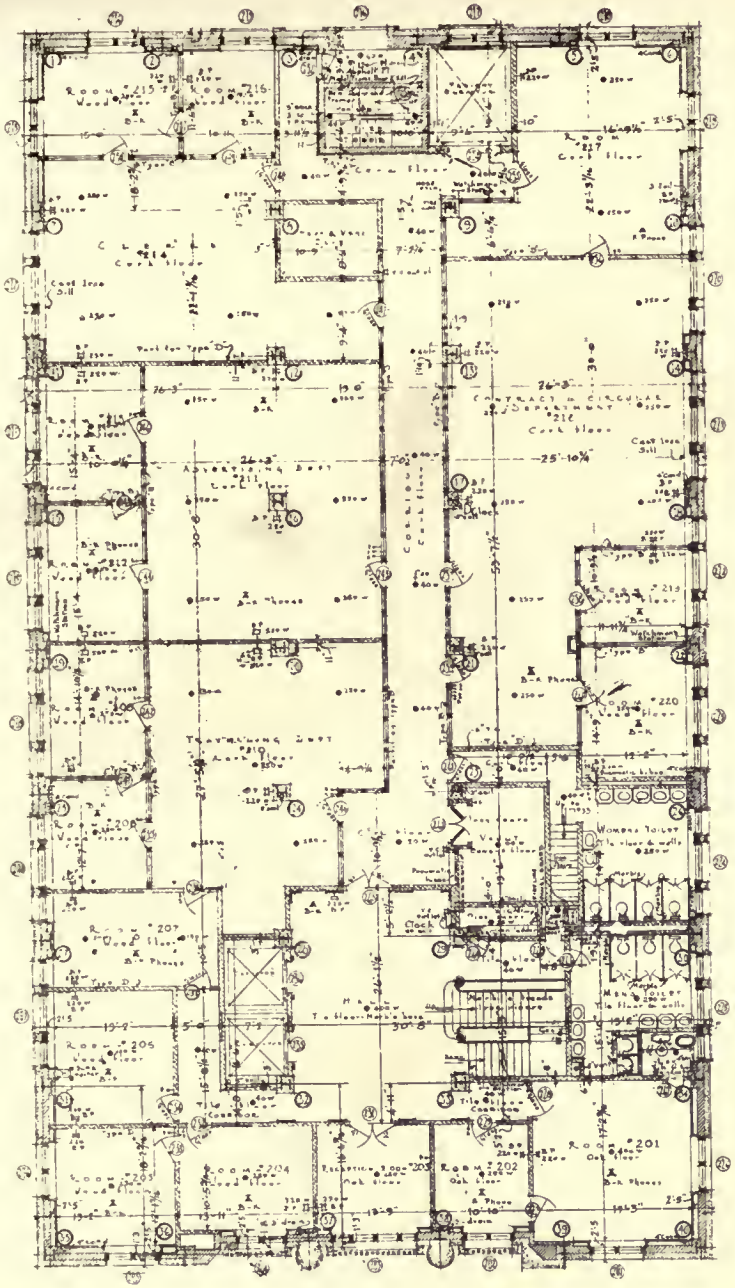
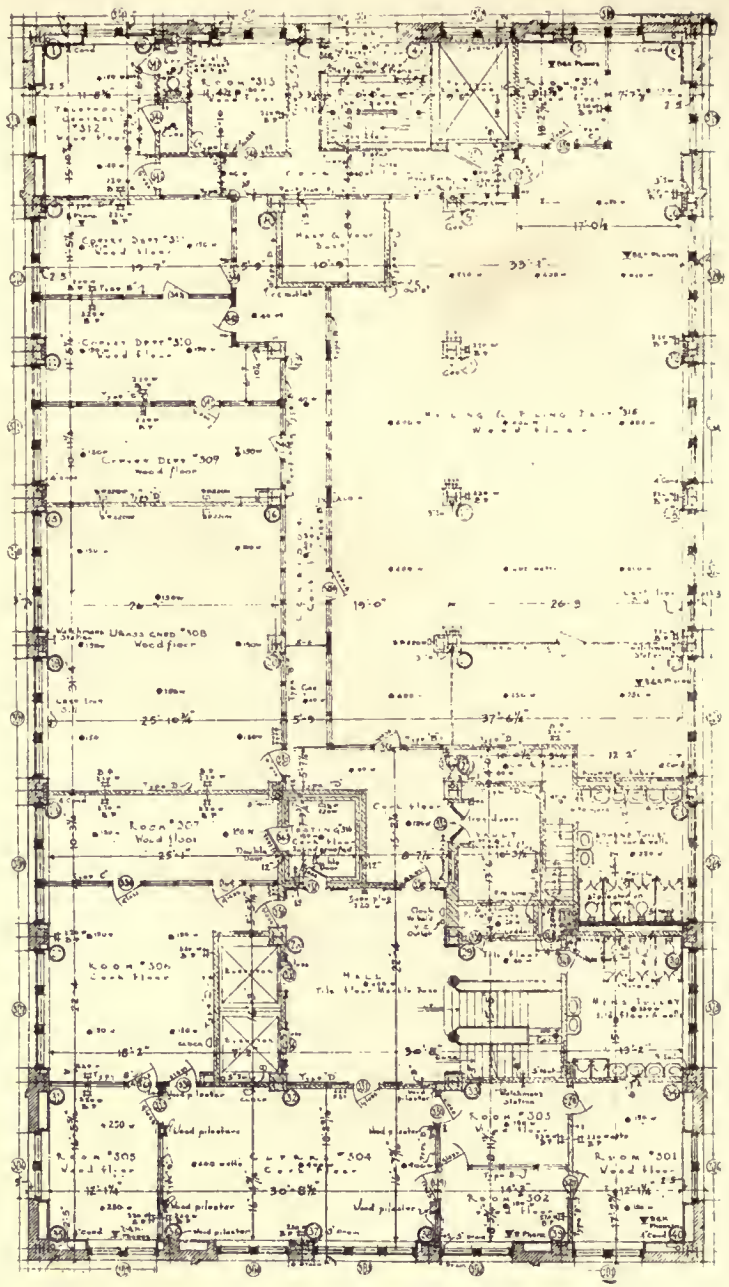
MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*



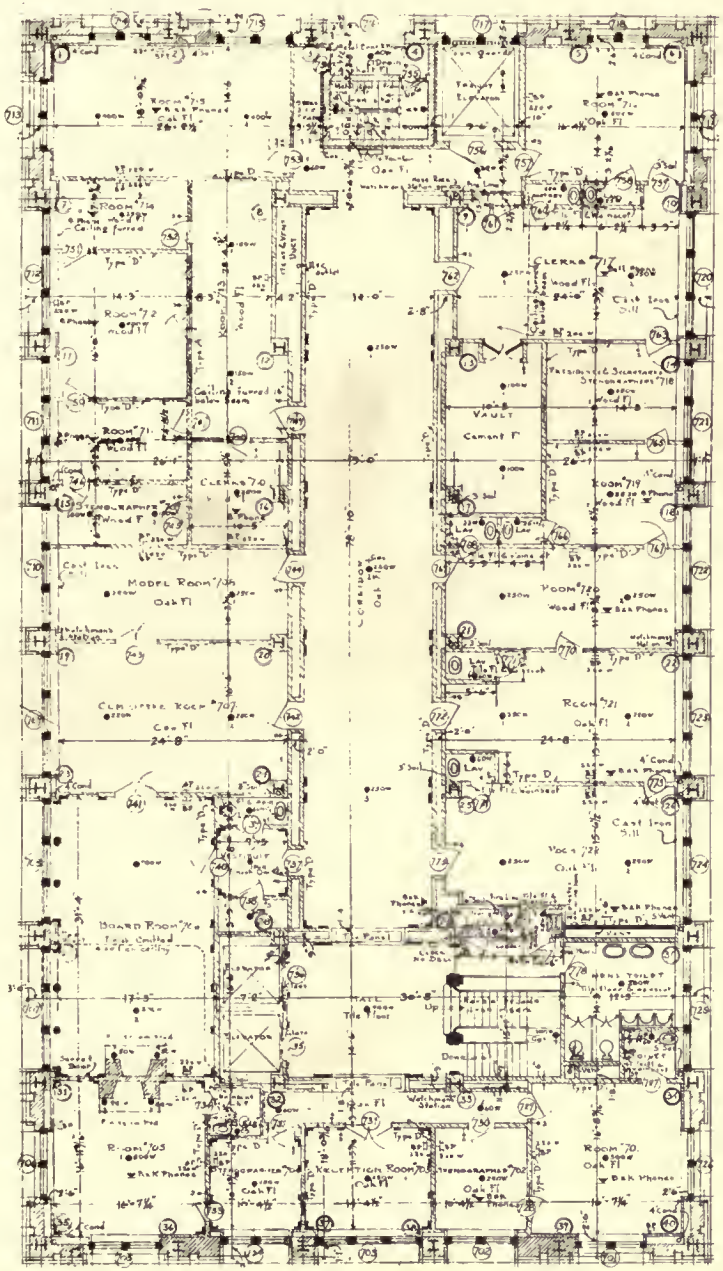
SECOND FLOOR PLAN



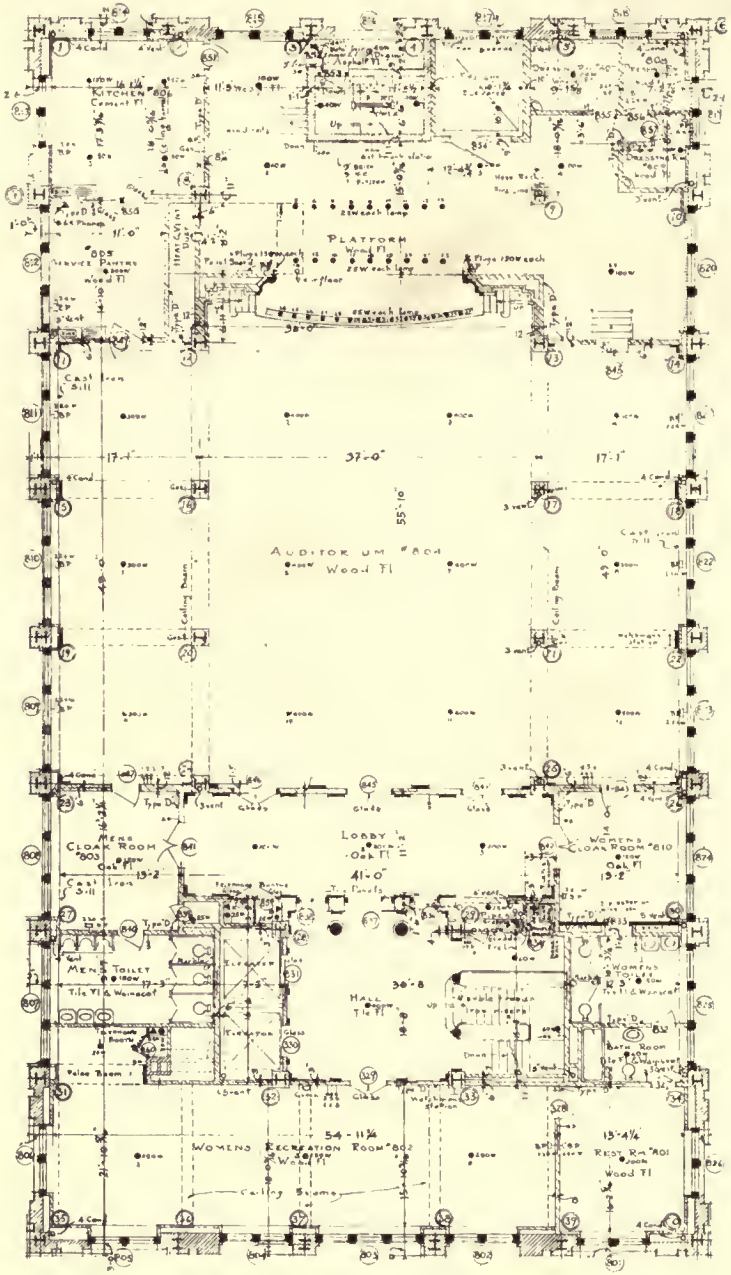
THIRD FLOOR PLAN

OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.

MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*



SEVENTH FLOOR PLAN



EIGHTH FLOOR PLAN

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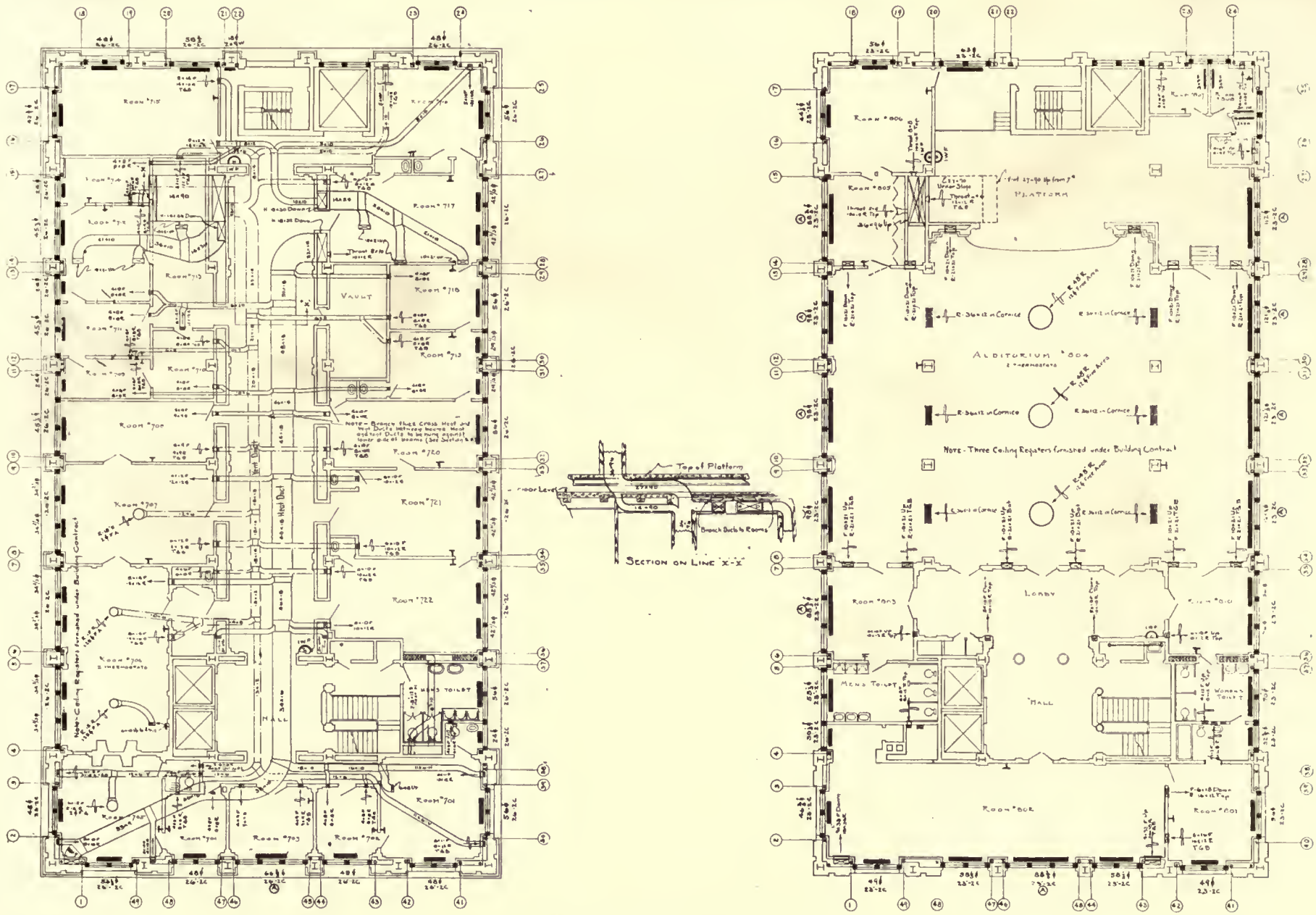

SEVENTH FLOOR HEATING AND VENTILATING LAYOUT EIGHTH FLOOR

OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.

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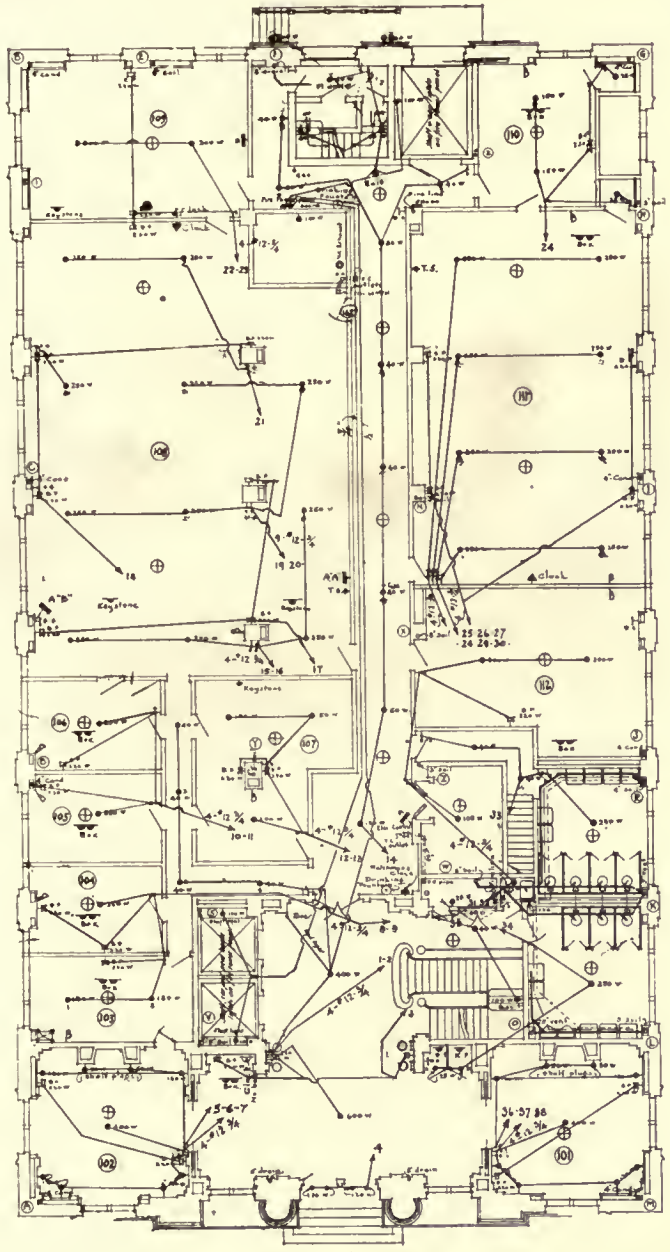
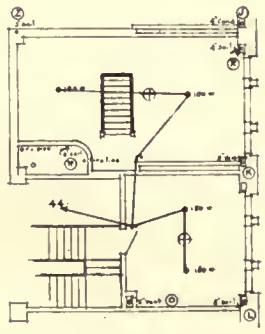
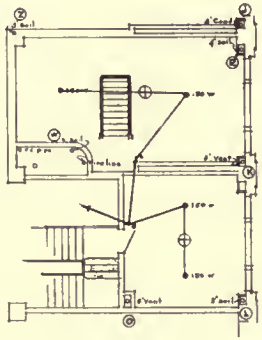
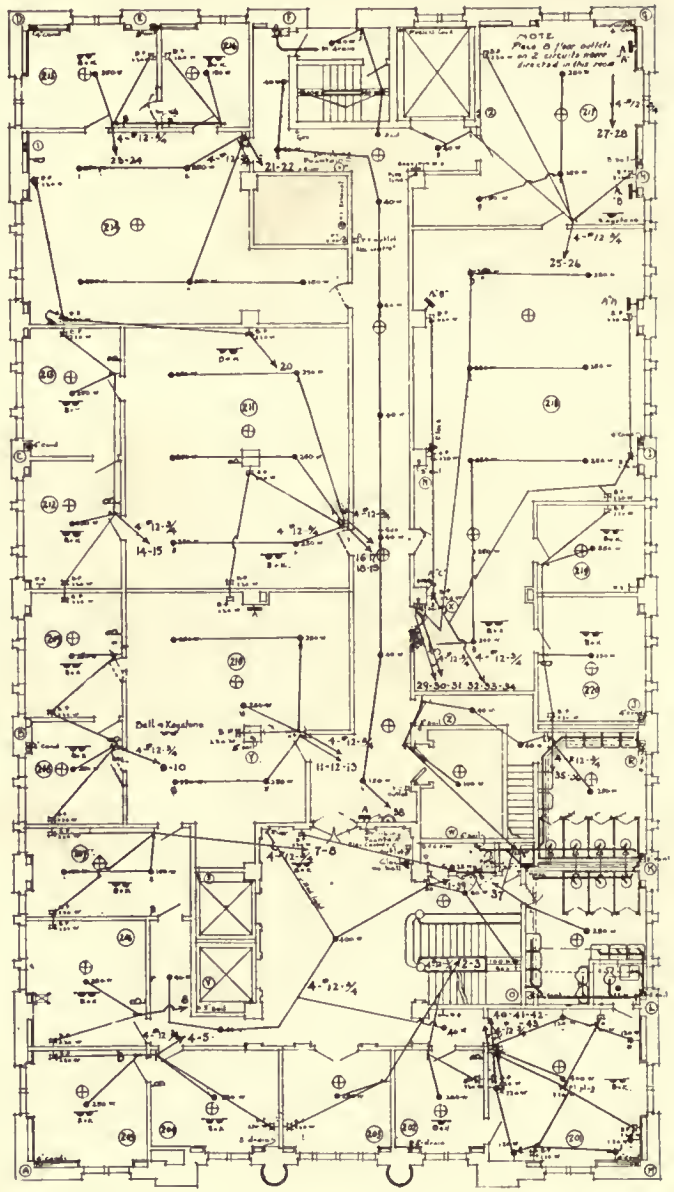


FIRST FLOOR







SECOND FLOOR

PLUMBING AND ELECTRICAL LAYOUT

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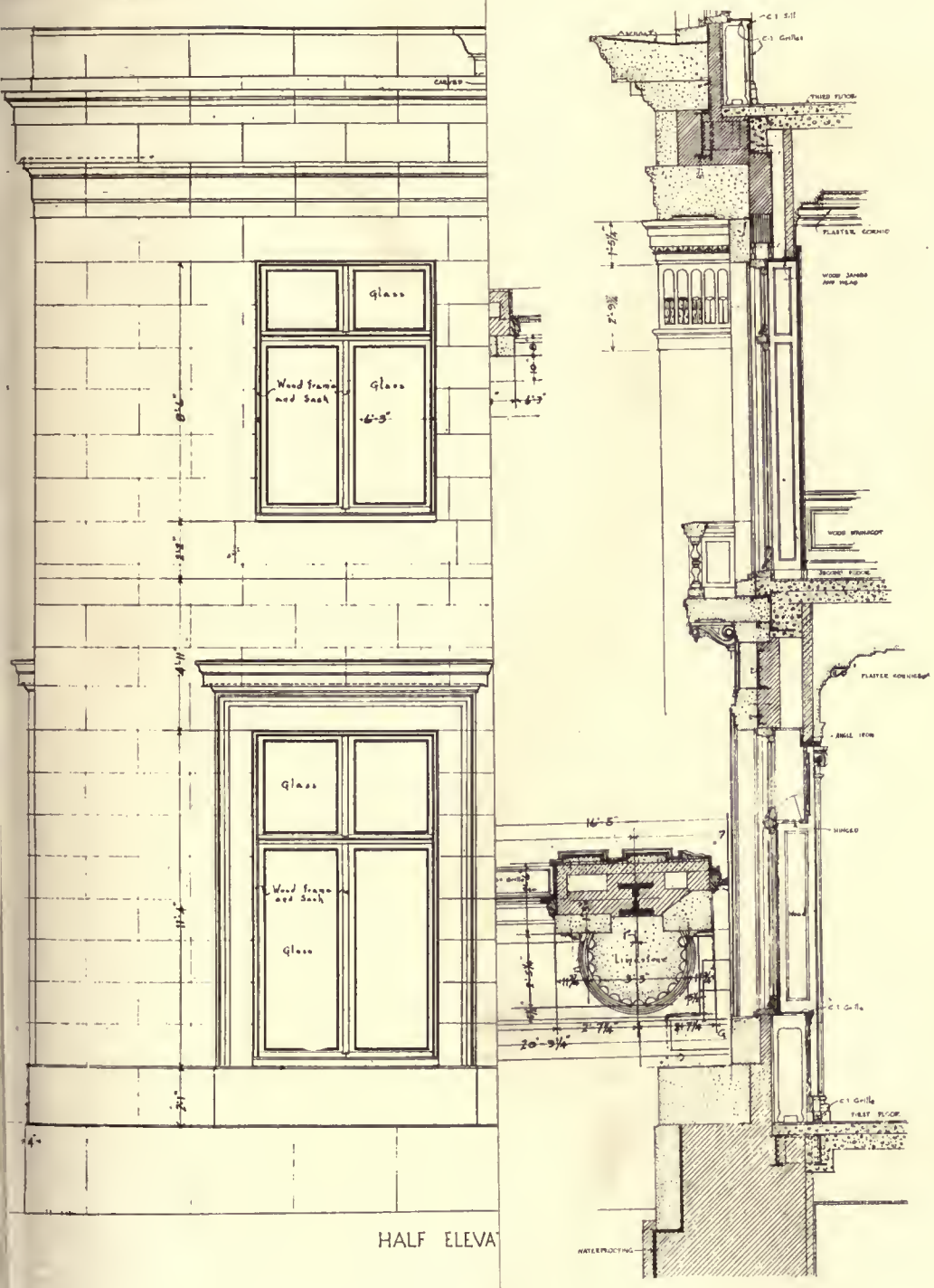
MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*

200"



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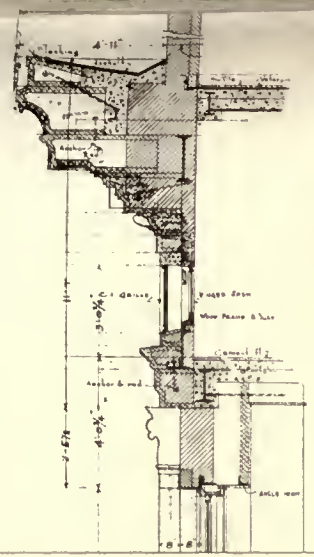
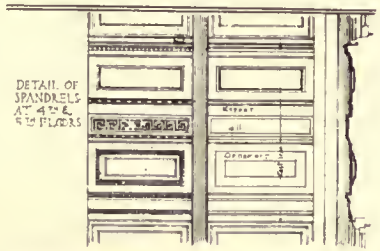
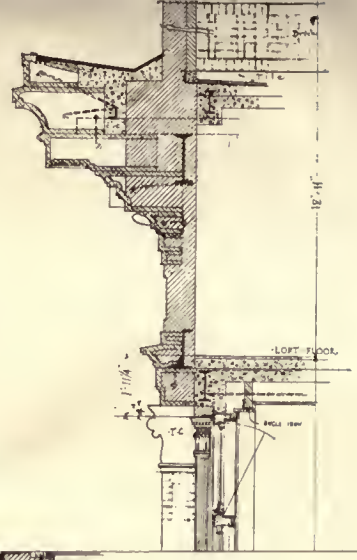
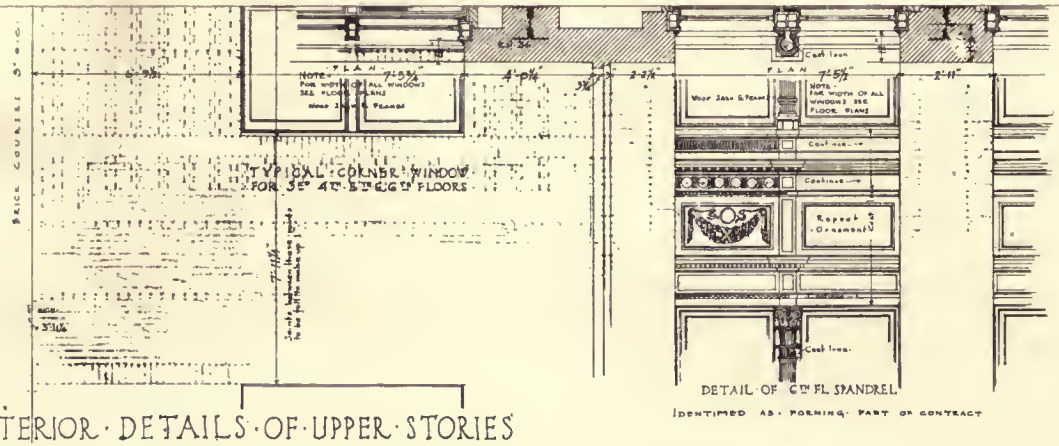







PLAN
PLAN
TYPICAL CORNER WINDOW FOR 3RD 4TH 5TH & 6TH FLOORS
DETAIL OF 6TH FL SPANDREL
IDENTIFIED AS FORMING PART OF CONTRACT

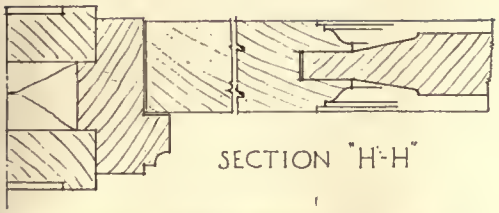
EXTERIOR DETAILS OF UPPER STORIES

OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.

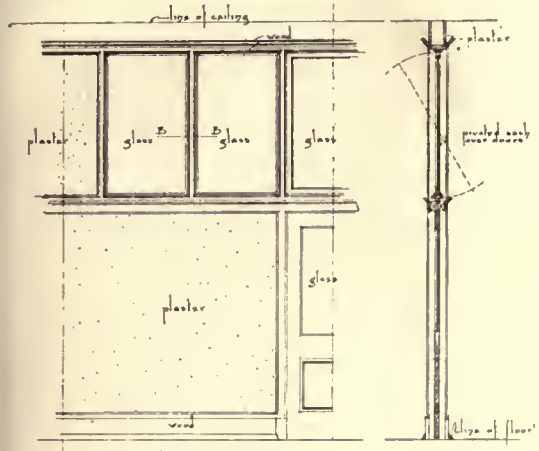
MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*

22

2003

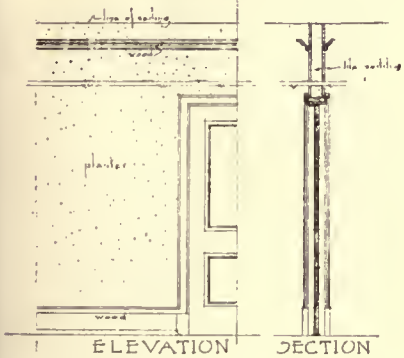


SECTION "H"-H"



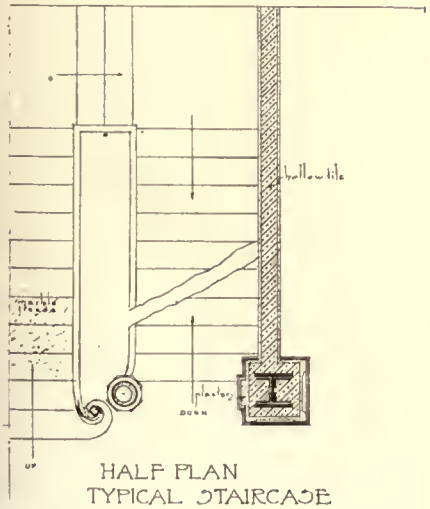
ELEVATION SECTION

TYPE A - PLASTER 7'-0" HIGH.



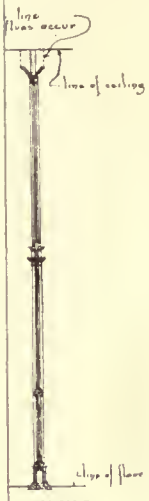
ELEVATION SECTION

TYPE "D"



HALF PLAN

TYPE STAIRCASE



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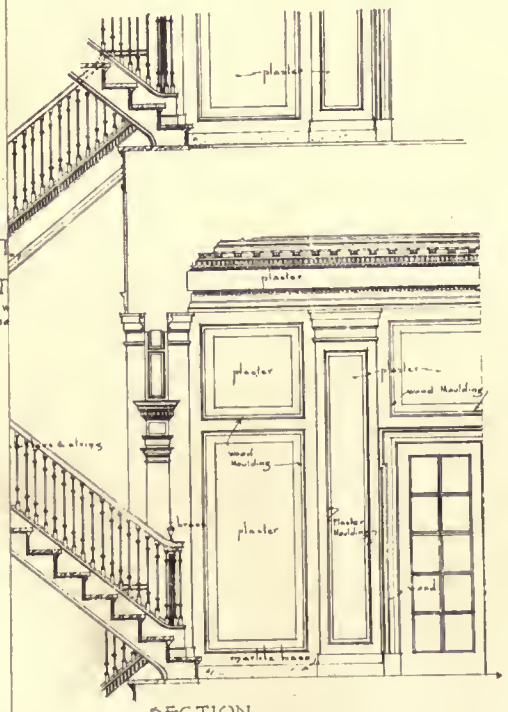
EILING



SECTION

TYPICAL STAIRCASE

THE AMERICAN ARCHITECT

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VOL. CXI MARCH 28, 1917 No. 2153

MAKING FULLER USE OF ARCHITECTURAL SERVICES

INSTANCES in which the architect of a building is commissioned to select, or design and supervise the manufacture of, its furnishings and decorations are multiplying each year. The wisdom from an artistic viewpoint of such action is beyond question and generally admitted where domestic architecture is concerned. In the case of commercial buildings, however, the utilitarian who is chiefly concerned in cost and efficiency, is still found interposing the argument that a chair or desk will perform its function equally well whether or not it is in artistic harmony with the office or room it helps to furnish: that, in fact, nothing beyond price, durability and facilities afforded need be considered in the furnishings of buildings belonging to the latter type.

The Victor Talking Machine Company's new building in Camden, N. J., illustrated in this issue, becomes, therefore, of peculiar interest as affording an instance of an office building in which the architects have been permitted to supervise every detail. The results secured seem to fully justify the claim that even in commercial buildings the owner who undertakes this portion of the work without the assistance which the trained architect is capable of rendering deprives himself of a service that is not less important as adding value to the building than arrangement of plan or design of exterior.

It would seem to be almost as logical for a client to employ an attorney simply to prepare a brief, and then dispense with his services before the case was tried in court, as it is to consider the architect's function performed when the structure itself has been completed, and before any decorating or furnishing has been done. Not only does the client suffer by discharging his architect before the building has been equipped, ready for occupancy, but the architect likewise not infrequently feels that the final result by which after all his work is judged, has suffered by the exercise of poor taste and judgment in its furnishing and decoration to a point where the building is no longer a credit to him. Considering this aspect of the matter it would appear probable that the time must come when architects who are mindful of maintaining the highest reputation for artistic ability will decline commissions for partial service; when they will insist on directing the work of furnishing and decoration as a condition of their employment. If this practice were general it is logical to believe that clients would soon come to recognize it as a wise and proper one, and that much of the dissatisfaction which under present conditions is not infrequently shared by both architect and client after final completion and occupancy of a building would entirely disappear.

THE RAILROAD'S BLIND SPOT

AFTER a period of debate punctuated by short and ugly words and amidst sarcasm and acrimony, the proposed agreement between the City and the New York Central Railroad in regard to new rights and franchises along the Hudson water front of Manhattan and beyond, has been referred back to the committee on Port and Terminal Facilities of the Board of Esti-

mate. As might have been known at the outset, so gigantic an undertaking could not long be kept out of the realm of politics; the financial status involved, the franchises of fabulous proportions and the resultant changes in the City's life and prospects of growth, all have been transmogrified into excellent political capital. The various parties have clung to this or that salient feature, have paraded it as a certain indication of Machiavellian intrigue on the part of those who now hold the reins. There have been accusations of collusion, of basking in the golden glint of the railroad's smile, of selling the water front for a mess of political porridge, of casting the welfare of nigh seven million souls into the greedy maw of a grasping monster of steel rails and noisy freight cars; this and much else in the same key. But we have noticed no loud voice from Grand Central. Where there is most to gain, perhaps it is wise to say least. So it must be, or else the railroad should have been willing to contribute illuminating chapters to the acrid discussion that has so long engaged us. For, after all, the railroad's engineers are best qualified to gage exact values to be expected from the proposed improvements. But the road has been discreetly silent, while absorbing all criticisms and quietly melting them down to be recast to its advantage.

Only once has the railroad spoken: and then its vice-president proclaimed in a Board of Estimate meeting, that the most roseate future could be guaranteed for the City on the basis of the projected improvements of the railroad. But we cannot help recognizing again the existence of a blind spot in the Railroad's vision. It insists upon confusing its images of the City and of the railroad and when the City alone is under consideration it cannot see at all. Psychologically, it seems the company spells New York City with the letters New York Central. It is not a remarkable case by any means; for New York City is but one terminal of so many thousand miles of track. Yet we cannot help but feel that New York is just a bit more than a flag stop. Only the Board of Estimate can guarantee such rights as the City deserves; instead the Board of Estimate seems content to play the part of a municipal charity dispensing water front and park land and monopoly easements galore and the right to inconvenience citizens, all for the benefit of a struggling corporation whose wealth and resources are sufficient two or three fold to buy outright the lands that it begs for and to use tunnels throughout its city route besides. We can only weep alligator's tears over the discomfiture of a corporation of such magnitude. And we cannot be brought to consider it a calamity if the City should still have Riverside Park and at least a few of its downtown streets when the "shiny ribbons" have traveled as far as they will.

HOME OFFICE BUILDING, VICTOR TALKING MACHINE CO.

(*Continued from page* 200)

trolled (except those in toilet and locker rooms and corridors).

The ventilation system, however, is more unusual in this type of building. The outside air is drawn in through a screened first floor opening by a main supply fan in the basement, delivering 46,000 cu. ft. of air per minute. This passes through tempering coils, then

CHAIR FOR DIRECTORS' ROOM

(From the original design by the Architects)

through an air washer, which removes all mechanical particles, then is reheated to 70 deg. and pumped into a great vertical air-shaft which rises through the entire building. From this shaft horizontal ducts branch off at each floor, and carry the air into each room through registers near the ceiling.

In a like, but reversed system, the vitiated air is carried off from the rooms, the small ducts opening into large ducts and these in turn into the great vertical shaft that carries the air up to the loft, where an exhaust fan pumps it out of doors through grilled openings in the frieze of the main cornice. In the system for air removal, registers are at both the top and bottom of rooms, the idea being that in summer, the top registers would be used for quickly removing the heated air from the upper part of the rooms, while in winter, the lower registers are sufficient to carry off the vitiated air.

The exhaust fan has a capacity of 70 per cent of the supply fan. This keeps the rooms under slight pressure.

The fresh air duct and the vitiated air duct were placed in a shaft of approximately 110 sq. ft. area, running vertically up through the building. The fresh air duct decreases in size as it rises and the vitiated air duct correspondingly increases, so that this total area could be kept constant all the way up.

No air is pumped into the toilet and locker rooms. They are ventilated by a separate fan through a separate system of ducts. These rooms have top vents only and provide six changes of air per minute.

As above stated, the ventilating system had its effect on the design of the steel. The ceilings are all furred down, so that they will give the maximum effectiveness for the indirect lighting, as well as mask the beams and girders. The main horizontal trunks of both fresh and vitiated air tapping the great vertical shaft run east and west, the direction of the long axis of the building. These run down the center bay of the steel columns between the floor slab and the furred ceiling, and branches from them shoot off to the various rooms. In order to be able to easily reach each room from these central trunks and not show in the ceiling (as they should if they dipped under girders running east and west) no girders were allowed in this central bay, while in the side bays all girders run north and south with beams east and west. In only one or two cases were difficulties encountered by following this system, but these were easily solved by a proper adjustment of both elements.

This furring of the ceilings also helped to mask the unsightly curves and bends in the piping of the pneumatic tube system. With an unalterably fixed minimum of radius for these curves, considerable preliminary study was necessary, but by

carrying this in mind early in the design the result is that these pipes are everywhere concealed. The value of this may be seen when it is realized that the tube station on the third floor is not only the central for this building, which has six stations, but is the central dispatching and receiving station for the entire Victor plant.

The low tension electrical system, as in all buildings of this character, is a most complicated affair—the location and number of buzzers, bells and buttons and annunciators being purely an arbitrary arrangement—but this is simplified so that when changes are desired, they can be made in about ten minutes. This applies in not only department and floor units, but in floor to floor cases. This applies as well to the telephones. Here two separate telephone companies maintain entirely distinct systems side by side throughout the building, some rooms using one system or the other, while some rooms use both. These results are obtainable through the use of special connectors in each office, consisting of two pieces of metal fitted together, one containing pins which fit into holes in the opposite plate, which permit a quick change of connections, also through low tension panel boards on each floor, where connections can be readily interchanged and the use of spare wires, which were liberally provided as part of the installation.

The building is equipped with a system of synchronizing clocks, controlled from a master clock, which receives its time over the Western Union lines.

AUDITORIUM, EIGHTH FLOOR

There are two fire-alarm boxes and six watchman's stations on each floor. Two vertical fire lines with connections at each floor and steamer connections at the street level are provided; also two vertical vacuum cleaner risers with two connections at each floor; and a filtering and refrigerating system which circulates filtered, refrigerated water through the building and provides cooling coils for the pantry and kitchen refrigerator boxes in a neighboring building, used by the Company for a lunch club.

The concentrated arrangement of gen-

eral locker and toilet rooms permitted the principal plumbing pipes to be run in the general pipe shaft, where they are readily accessible, and all vent pipes were connected in the loft to one large, main vent pipe, which was extended through the roof of the elevator machinery house, well above the main roof and in a position where it is concealed and cannot become objectionable.

As the city sewers are above the basement floor level, the plumbing fixtures on this floor are connected to an electric sewage ejector, which raises the sewage and discharges it into the sewer.

OFFICE OF GENERAL MANAGER

HOME OFFICE BUILDING, VICTOR TALKING MACHINE CO., CAMDEN, N. J.

MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*

THE SAD STORY OF CANBERRA

By RICHARD F. BACH

IN these columns have been recorded recently and in quick succession, first the reopening of the Parliament House Competition in connection with Australia's new capital city of Canberra, and almost immediately afterward the indefinite postponement of the competition due to the war of all Europe. These announcements prompt a review of this remarkable undertaking to date.

The architectural world has been fully justified in its original assumption that Walter Burley Griffin's fine plan for Canberra would have to pass through a torment of manipulation and modification, not to mention malicious assault, before the Australian sun might shine upon the new federal capital of the English colony in full execution. The struggle to maintain the integrity of the original American design for the British government center practically antedates the time of the actual competition to determine upon a great harmonious scheme of development for the new chief city of a rapidly growing commonwealth, a city to be situated in the open country; its design involving the project of bringing a federal capital Aladdin-like out of the earth. Such a project can reasonably have but one aspect, namely, that of the prearranged plan, based upon an absolute knowledge of present needs as modified by a fine appreciation of potential growth and expansion. But there are regions in which the advantages of such an attitude are unknown or wilfully ignored; there are many who believe even in this day of progress that community plans may be made in a general way and concocted over night; there are some who still believe that the city's future purposes must be permitted to unmake any prearranged plan to any desired extent—in short, that a city should be allowed to grow, as New York grew, from a confusion of more or less well regulated cow paths.

It seems, however, that the planners in the case of Canberra at least had the upper hand for a brief time, long enough to hold a competition and to award the decision to Mr. Griffin of Chicago. Then began the evils of a mode of petty obstruction for which the Australians have coined an apt word, departmentalism. It is the tale of the constant wearying skirmish between these two factions that constitutes the sad story of Canberra. It is the story of what appears to be a gigantic piece of official incompetence, mismanagement and bungling. Finally, it contains so many lessons for growing American cities, that it may be well briefly to recount a few of the chapters of its checkered history.

To begin with, the insinuating evils of departmentalism manifested themselves in an industrious expenditure of public money to the amount of over five and a quarter millions of dollars on the site during the actual period of the competition in question. New bridges and concrete administration offices were built, new roads laid down, old roads remade, and all in defiance of any future developments to be determined by the character of the winning design for the "capital in the bush." The winner was decided upon on May 14, 1912, after this vast sum had been expended upon a number of structures with the full knowledge that they would probably have to be removed at an early date. In the face of the competition, furthermore, and after its conclusion, the Federal Department of Home Affairs continued its obstructionist policy by planning further expenditures on the same site amounting to about two and one-half million dollars more and by inaugurating a systematic campaign to belittle and vitiate the accepted or, in fact, any accepted design. Its trump card in this effort was its own so-called "built up plan," undoubtedly one of the most stupid products of a benighted officialdom, which resents the opinion of the expert as an intrusion upon its sacred narrow gage routine. But the built-up plan was ridiculed into insignificance by architects and

city planners alike and was finally annulled by the Australian government. Mr. Griffin, the American architect responsible for the successful plan, was appointed Federal Capital Director of Design and Construction. He proceeded to work out the elements of his scheme in a general way, obtained competent assistance and returned to America to arrange his affairs preparatory to the serious business of bringing his design into execution. Before his departure he laid himself open to attack by saying, in somewhat involved fashion, in the conditions to control the then forthcoming competition for the Federal Parliament group on the new site, that "the Australian Commonwealth, with no historically evolved suitable architectural style, but with unique scope in its unlimited open continent for national growth, with this virgin city site under unified control, and possessed of modern building science, appliances and materials, is in a position to exact unity in plan and homogeneity in expression and harmony with whole natural environment beyond any ordinary opportunity. Since the city is to evolve gradually, the desired unity cannot be assured by personality, nor can it under popular government be established by authoritative decree of any arbitrary type. Hence it is desired that the standard of design be the expression of actual functions through practical organic planning; through the direct adaptation of the inherent characteristics of the materials used, avoiding intrusion of irrelevant features, however time honored, on the one hand, or individual on the other, and through recognition of the peculiar site conditions."* This series of confused sentences was considered in the camp of his opponents, who now sought every opening whether in accord with departmental plans or not, as an attempt ruthlessly to eliminate all traditional design. Griffin's real error was grammatical rather than architectural; a clearer statement would have shown that he simply desired competitors to bear in mind that a fine English Renaissance design or a picturesque Gothic silhouette would not logically take its place in the backwoods of Australia, and that, furthermore, it would be reasonable to assume that time and place and conditions of people, as well as of government, might be permitted to play their unequivocal role in so important a project.

Mr. Griffin's absence in America offered his detractors the necessary strategical opening, and an insistent newspaper campaign was launched against him at Sydney, the present capital. Before his departure, he had assigned to him a capable substitute, Mr. A. J. McDonald, whom he left in charge of the work of preparing the preliminary plans, based upon his winning design and modified in accordance with subsequent requirements, so as to have them ready for presentation upon his return. It happened that this person was by appointment attached to the Patent Office, under the Home Affairs Department, and had only been lent to Mr. Griffin. The loan, it seems, became subject to call promptly on information that Mr. Griffin's ship had left, with the result that when he returned all of his earlier constructive work had been set at naught, his forces had been shattered, his supporters crushed, his plan all but discredited, and departmentalism was again in the ascendant. The attack had been in the form of an attrition process, wearing away one creditable feature after another. But Mr. Griffin had brought with him an entire armory of new weapons. He had visited and had been advised by the four appointed adjudicators for the proposed Federal Parliament House competition, namely, Louis H. Sullivan of Chicago, John James Burnet of London, Victor Laloux of Paris and Otto Wagner of Vienna. He had gathered also a multitude of other opinions from various important bodies of architects and engineers, as well as from individuals of note. The weight of this evidence was so decidedly in favor of Griffin's plan that the pendulum swung once more in his direction. But departmentalism countered by refusing him the necessary professional assistance, which unfortunately was in the gift of officialdom. Nothing daunted, Mr. Griffin next assailed the Director General of Works, demanding to know the extent of the unnecessary "improvements" being made

*Architects' and Builders' Journal, London.

on the site of the future city. He was promptly sent packing by that official. Mr. Griffin reported his interview to the Minister of Home Affairs in the following rational terms: "Also I have taken steps to inform myself as to the foundation of affairs in the construction work going on at the Federal Capital, and have found that the Director General of Works considers that this is none of my business, and he has declined to give me the status of the finances on those grounds, stating, however, that all the funds were earmarked for definite purposes which must be complied with, and that nothing would be available for staking out and carrying into effect the plans of the city under any existing provisions. He discussed the matter very candidly with me, and considers that design and construction should be independent of one another, and that design can be laid down without reference to construction, which could then be taken up subsequently; that design, in his estimation, primarily concerns esthetics. Of course, my own understanding is quite the reverse, *i.e.*, that design is a consequence of constructive needs as well as of functional needs, and that only on the broad basis of both together can it be effectively handled." The Minister addressed then turned the score in Griffin's favor by issuing instructions to the effect that the Federal Capital Director of Design and Construction be assisted in every way in understanding "the purpose, extent and policy of the engineering services being established" on the site, and by specifically ordering the Director General of Works to give "expeditious answers" when information was called for. Griffin at once demanded minute details covering every iota of expense and design, specifications, plans, working drawings, in fact, everything in connection with the work under way. It was found that such a blanket demand would cover details concerning rabbit destruction as well as bridge building, and several months' correspondence ensued to define more closely the extent of Mr. Griffin's authority along such lines.

Departmentalism made its last stand when it raised a purely academic question of terminology, as to the meaning of the words "preliminary layout," which Mr. Griffin had frequently used as descriptive of the final stage of his plan, subject only to detail modifications, unavoidable or not possibly to be foreseen at the beginning. These defenses were finally beaten down, however, and Mr. Griffin's way was clear after more than two years' skirmishing.

Then came the thunder clap of the declaration of war, and the whirlpool of political confusion engulfed Canberra and its architect. After discordant forces had adjusted themselves and the governmental machine once more ran on an even track, the control was in other hands, and Canberra had been pigeon-holed. The whole work of instructing the new government had to be begun again and the project was not a whit nearer completion than it had been five years ago. The architect's task had been uphill work, the serious matter of educating a growing nation and, what is more, educating that nation up to a city planning standard, a new conception in many regions to be sure; and all of this in the face of petty meddling and incompetence on every hand.

We may learn much from the fate of Canberra. Above all, we may learn the paramount lesson of laying our nets properly in the first place, and of not laying them at all until we know that all potential difficulties will be met and all human contingencies have been provided for. We may learn also that city planning is of crucial importance and should not be submerged in the best of building departments. Finally, we are convinced that civic officials are not as a general rule experts and that when experts are engaged by a city, their status, power and responsibilities with reference to their own duties and with reference to the work of other departments must be determined before the first spadeful of earth is dug. The lack of proper administrative control in all these respects has contributed troubled chapters to the sad story of Canberra.

SKETCH OF LOGGIA

PROPOSED MUNICIPAL AUDITORIUM FOR CITY OF PHILADELPHIA

MR. JOHN T. WINDRIM, *ARCHITECT*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, APRIL 4, 1917 NUMBER 2154

TWENTY-THIRD ANNUAL ARCHITECTURAL EXHIBITION—PHILADELPHIA CHAPTER, A. I. A. AND T-SQUARE CLUB

ARCHITECTURAL Societies, with the highest ideals, may be said to find motives other than the exploitation of their individual work as the real goal for which they strive. And while, with pardonable pride, they will annually set forth in their exhibitions, examples of their completed or tentative work which they regard as of sufficient interest to justify such use of them the real results are accomplished throughout the entire year, when by constant effort, the ethics of professional practice are guarded, the highest features of education promoted, and the historical heritage conserved to the fullest extent. Exhibitions, small but of the highest excellence, such as those held by the T-Square Club each year, among the most artistic surroundings, serve admirably as a background for the social features always present on these annual occasions.

In the present exhibition, the positions of honor on the walls have been given to Messrs. McKim, Mead & White's prize winning drawings of the recent Newark, N. J., competition, and the splendid collection of photographs of Mr. John Russell Pope's Scottish Rite Temple in Washington. Both of these were features of the Architectural League Exhibition, now closed. The remaining wall space with minor exceptions is filled with photographs, well-executed renderings and plaster models of work by members of the T-Square Club and the Philadelphia Chapter.

All of this material would seem to represent the best of the work done during the past year, or work now well on towards completion. It is in a sense a de luxe exhibition. All of it reflects a condition of the best architectural expression, guided by reverential and competent minds.

In writing of a former exhibition we took occasion to refer to the unusual artistic heritage of the men in Philadelphia and vicinity. Second only, and perhaps equal to Boston in early colonial interest, Philadelphia and its environs have preserved, as far as it has been possible to do so, the "atmosphere" of its earlier days and the buildings that have been the theater of our most important historical episodes.

Whether the venerated Independence Hall, or some obscure house in an outlying suburb, they have been carefully watched and their beauties preserved to the fullest possible extent. This solicitous care of the good architecture of a most important period of our national life, appears to have created a very high standard of architecture in that vicinity.

Motor in any direction about suburban Philadelphia, or through its many narrow "one-way" streets, and note how the traditions of design of dignity and of good architectural expression have been maintained.

Few cities in the East have as dignified suburban towns as Philadelphia.

Wander about this present exhibition and you will recognize many of the delightful houses of the suburb, or the dignified, well-designed structures that have grown in town since your last visit. And among the showing of uncompleted or ten-

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WALTER COPE MEMORIAL PRIZE
GROUP OF WORKMEN'S HOUSES
FIRST PRIZE, MR. CHARLES E. KEYSER, JR.
Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

tative work, the promise of a future dignified and equally successful addition.

The Americanization of our large foreign population is such a slow and tedious process, that before it is effected we may well run the risk of the obliteration of many of those characteristics of architecture and daily life, that to those of the older generation are of such moment, but while they endure the most should be made of them.

No work in our national upbuilding can be of greater service than the conservation of the things that we have just described. The American Institute of Architects and the allied societies, such, for example, as the T-Square Club, will be serving the highest purpose and earning the gratitude of members of the profession generally when they engage in this work.

And now, when the world is all afire with strife, and we know not what a day may bring forth, where could we look for a steadiness of purpose in the conservation of Americanism if not in that city where Liberty was proclaimed to all the world?

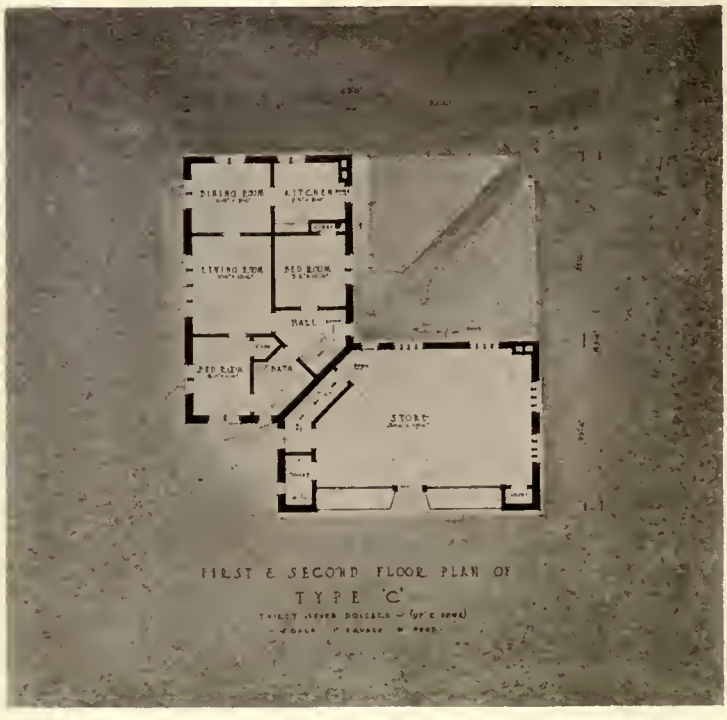
It is good to see this spirit displayed as it is in this T-Square exhibition. To know that the art of architecture is in good keeping, and that a high spirit of good art, of good-fellowship and competence, dominates the entire field.

William Rotch Ware

It is with profound regret that we learn of the death of William Rotch Ware. He died at Newton, Mass., March 28, at the age of 68 years.

Mr. Ware was identified with THE AMERICAN ARCHITECT from its inception and from 1876 to 1907 was editor-in-chief.

A more extended account of his life and work will appear in a later issue.



WALTER COPE MEMORIAL PRIZE
GROUP OF WORKMEN'S HOUSES
FIRST PRIZE, MR. CHARLES E. KEYSER, JR.
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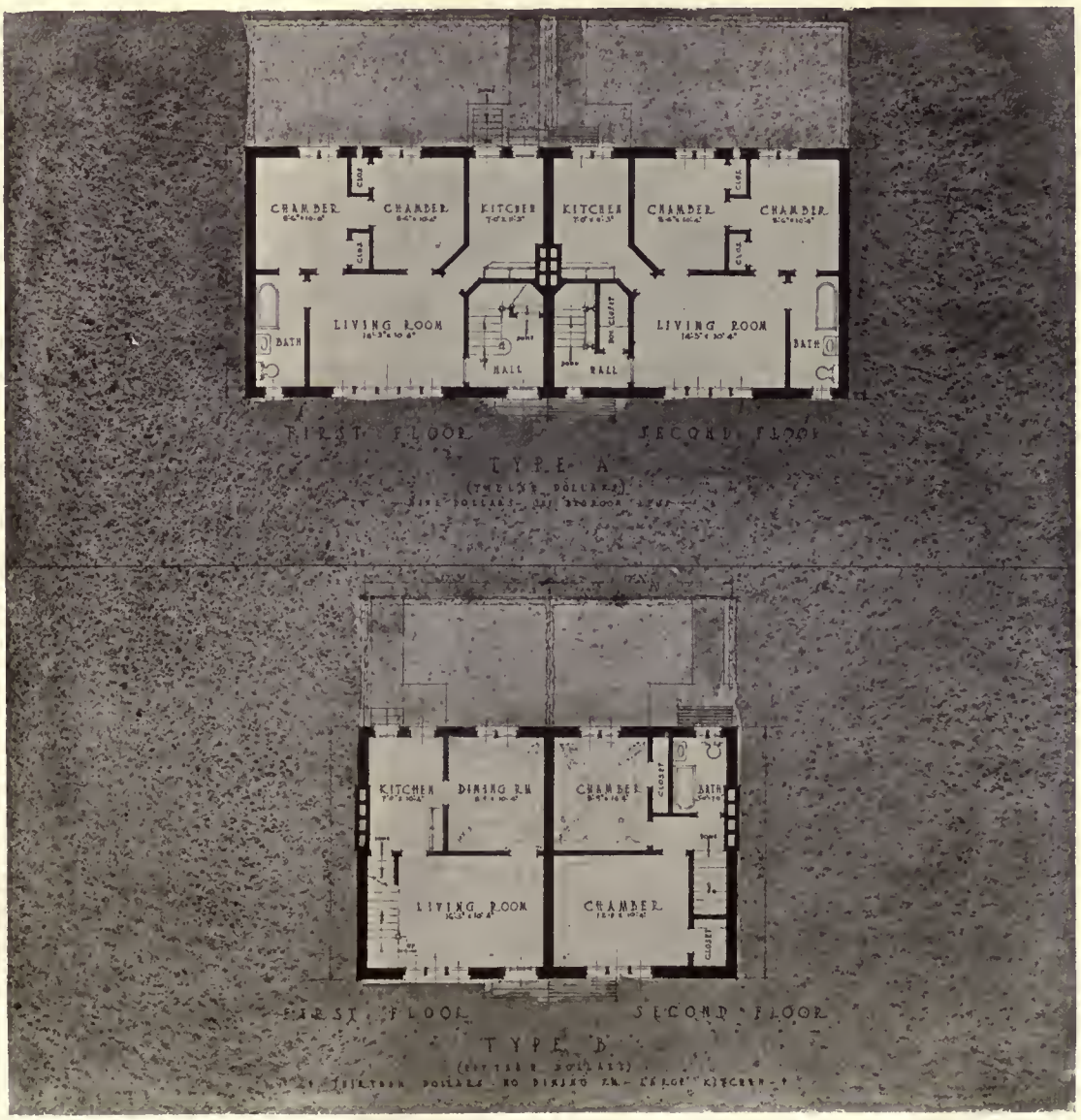
PROFESSIONAL PROBLEMS

THE following abstract from a paper presented by F. O. Adams, Jr., architect, before the recent fifth annual convention of the Florida Association of Architects, will be read with interest, as clearly defining the attitude of the architect toward the public, and the important duty that devolves on every man in practice:

"This master problem, upon the proper solution of which depends so much, not only of interest to us individually and as a profession, but also to every movement having for its object progress and the advancement of our civilization, is Ignorance. It is to be found in various forms and in varying degrees of intensity, from a careless lack of appreciation of what others are trying to do to a most complete absence of knowledge regarding the



WALTER COPE MEMORIAL PRIZE

GROUP OF WORKMEN'S HOUSES

FIRST PRIZE, MR. CHARLES E. KEYSER, JR.

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

SHOP OF MESSRS. ROBINSON AND FARR, PHILADELPHIA, PA.
MESSRS. TILDEN AND REGISTER, *ARCHITECTS*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

very fundamental elements upon which civilization itself is based.

"Architecture, as a profession, is recognized by enlightened people as leading the onward march of progress. It combines science and art in an harmonious whole. It is creative as well as interpretative, and is an economic force as well as esthetic one. As an educational influence it bears somewhat the same relation to city life that nature does to country life, in that it is an open book, free to all. The educational value of paintings, tapestries, sculpture and other examples of specialized art is limited because seldom accessible to the general public, but even the humblest citizen may appreciate and enjoy the inherent charm of a well-designed building, expressing as it does, in immobile wood, brick, terra cotta or stone, the purposes which inspired it, or the activities which are housed therein.

"This universal proprietorship in the fruits of architecture lays certain undeniable obligations upon the architect, obligations completely aside from those obviously created by his relation to the owner, but none the less insistent. Nay, even more insistent, since man's duty to society transcends any mere obligation to the individual. For the architect is a custodian of the public health and safety and, through his works, should be a guide to public taste. Hardly less sacred are his responsibilities toward the man who

has intrusted him with the task of providing a building suited to his needs, responsibilities in no degree measured by the fee involved. Advice as to the investment, type of building, location or cost must be given in the face of a possible pecuniary loss to himself; drawings and specifications must be prepared with the interest of the client only in mind; and contracts made and the execution of the work supervised with the same object always in view. Toward the builder also, his duty is no less clear. While insisting upon a full compliance with the terms of the building agreement, the architect must exercise most careful impartiality in awarding the contract and in supervising the execution of the same, honestly assuming all liability arising from imperfections that may appear in the instruments which he has prepared. Thus does the profession demand of its votaries, not only a high degree of technical and artistic ability, but an even higher degree of ethical perception and practice. No true architect has need of the 'Canons of Ethics' or guides to professional practice to dictate to him in his proper course of action."

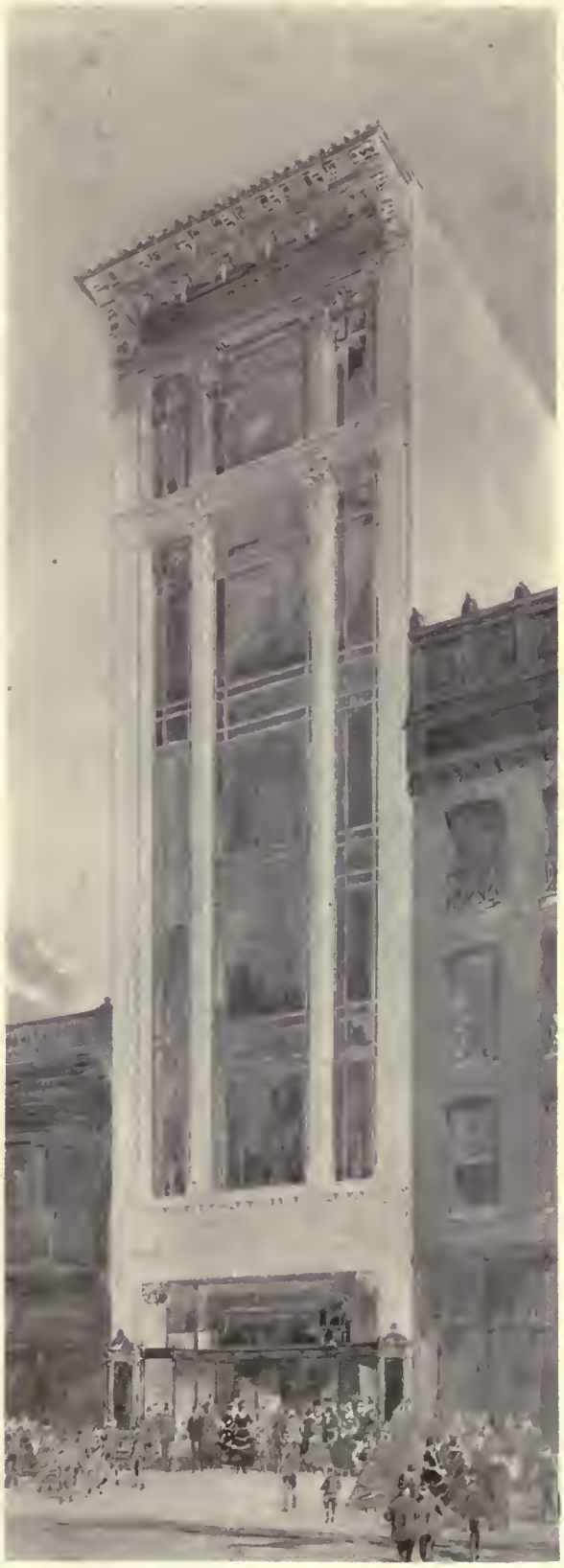
Book Note

THE CATHEDRALS OF GREAT BRITAIN, Their History and Architecture. By P. H. Ditchfield, M.A.F.S.A. New and revised edition. New York, E. P. Dutton & Co; London, Paris and Toronto, J. M. Dent & Sons, Ltd. Full cloth, 480 pp. (illustrated). Size 5 x 7 inches. Price $1.75.

This work, originally published in 1902, has gone through several editions. While, as its name indicates, it is in a sense simply a guide book, it nevertheless gives an intimate and measurably accurate account of the dominating architectural features of English Cathedral.

The various plans are said to be from authentic sources and the "key" reference makes them of considerable use in a study of the buildings.

The work would have considerable reference value in an architect's library.



STORE FOR A. POMERANTZ COMPANY
PHILADELPHIA, PA.
MESSRS. SIMON AND BASSETT, *ARCHITECTS*
Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

MAIN ENTRANCE TO THE BIRD HOUSE, ZOOLOGICAL GARDENS, PHILADELPHIA

MESSRS. MELLOR, MEIGS AND HOWE, *ARCHITECTS*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

THE FORE-COURT

HOUSE OF CASPAR W. MORRIS, ESQ., HAVERFORD, PA.

MESSRS. MELLOR, MEIGS AND HOWE, *ARCHITECTS*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

THE TERRACE

HOUSE OF CASPAR W. MORRIS, ESQ., HAVERFORD, PA.

MESSRS. MELLOR, MEIGS AND HOWE, *ARCHITECTS*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

214³

THE LIVING ROOM

HOUSE OF CASPAR W. MORRIS, ESQ., HAVERFORD, PA.

MESSRS. MELLOR, MEIGS AND HOWE, *ARCHITECTS*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

VIEW FROM FRONT DOOR

VIEW FROM DINING ROOM

HOUSE OF CASPAR W. MORRIS, ESQ., HAVERFORD, PA.

MESSRS. MELLOR, MEIGS AND HOWE, *ARCHITECTS*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

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ENTRANCE TO HADDINGTON BRANCH LIBRARY, PHILADELPHIA, PA.

MR. ALBERT KELSEY, *ARCHITECT*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

FALLS OF SCHUYLKILL BRANCH FREE LIBRARY OF PHILADELPHIA, PA.

MESSRS. RANKIN, KELLOGG AND CRANE, *ARCHITECTS*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

HOUSE FOR JOHN F. MEIGS, ESQ., ITHAN, PA.

MESSRS. MELLOR, MEIGS AND HOWE, *ARCHITECTS*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

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VOL. CXI, NO. 2154 THE AMERICAN ARCHITECT APRIL 4, 1917

HOUSE FOR CHARLES PLATT, 3D, ESQ., "ALLONBY," LAVEROCK, PA.

MR. JOSEPH P. SIMS, OF MESSRS. FURNESS, EVANS AND CO., *ARCHITECT*

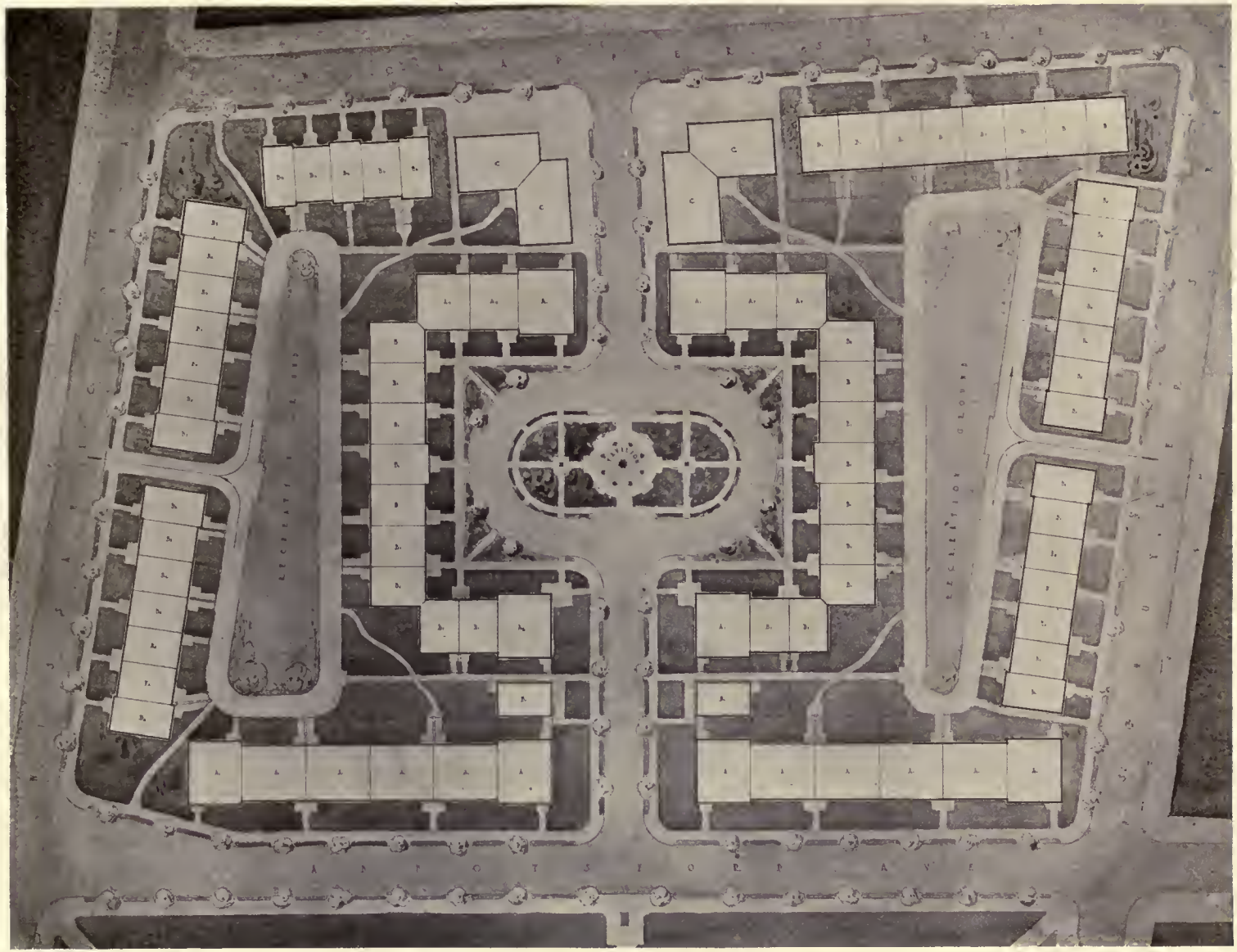
Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

THE WALTER COPE MEMORIAL PRIZE

A Group of Workmen's Houses

FIRST PRIZE, MR. CHARLES E. KEYSER, JR.

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club



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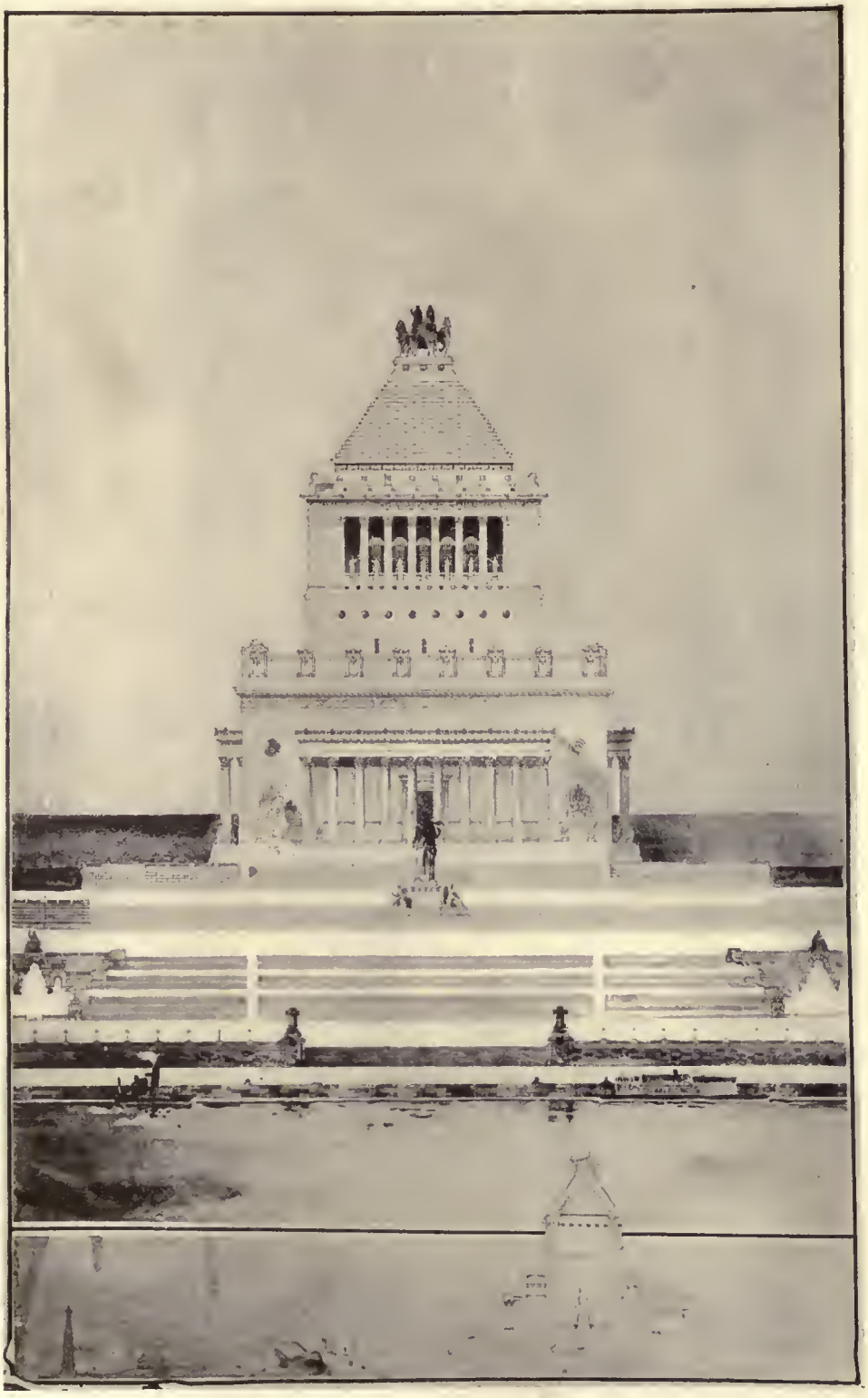
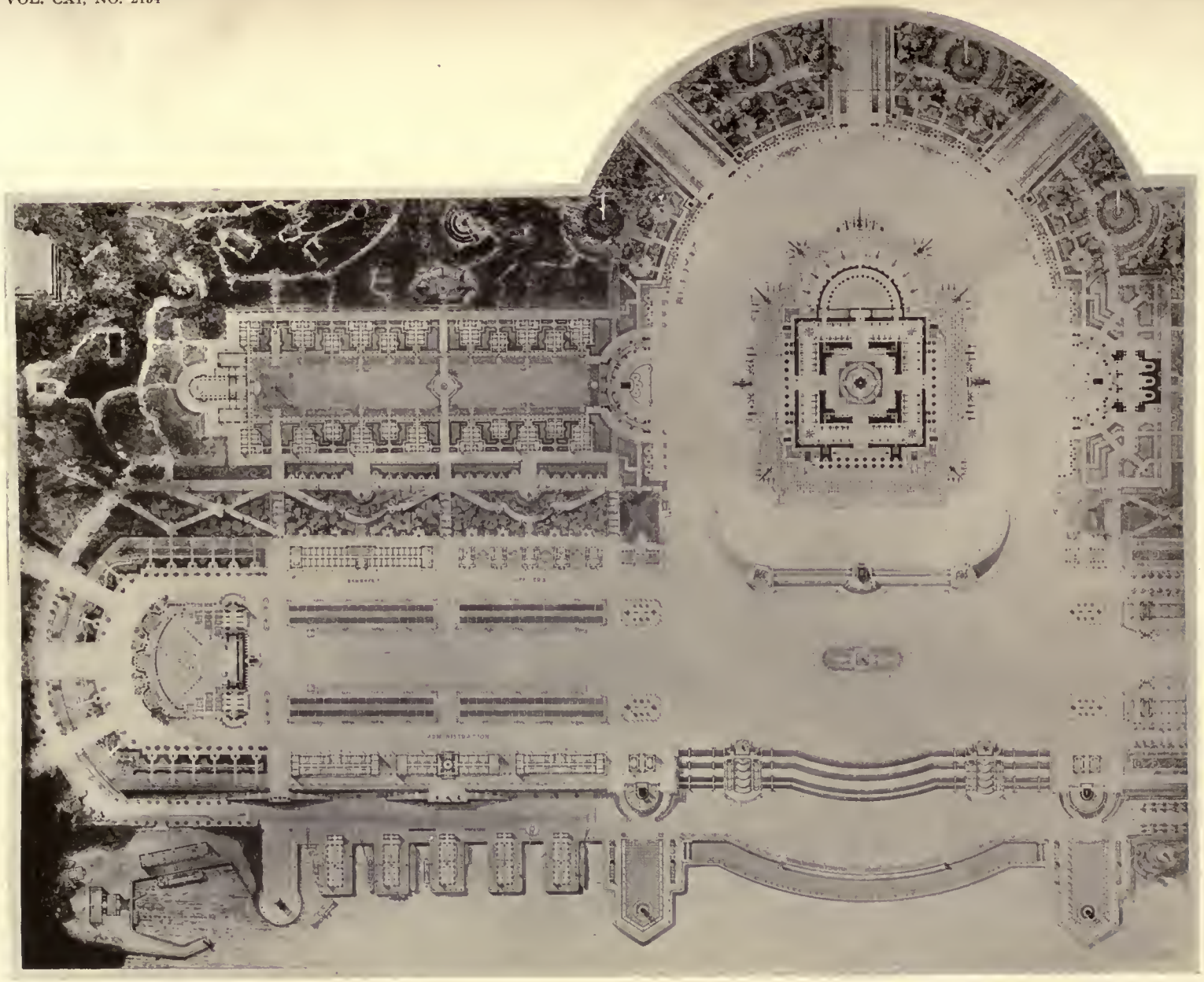


THE JOHN STEWARDSON MEMORIAL PRIZE COMPETITION

A Military Center

WINNING DESIGN BY MR. H. L. RUBIN

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club



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to that of the Independent Artists, and its exhibitions each spring have been the artistic events of the year.

In defense of the non-jury system it is contended that no jury, regardless of the qualifications of its members, can select the pictures that will possess the greatest educational appeal to the general public. The reason assigned is that a jury of painters naturally selects canvases that are purely examples of style and technique, and rejects in many instances pictures in which the public would be interested, and from which it would gain inspiration.

In any event, the outcome of the new departure will be awaited with considerable interest, and it is to be hoped that it will be decisive. If the jury system does hamper a free expression of art the fact should be established and recognized. If, on the other hand, it serves to prevent the foisting on the public of a lot of pictures that have no artistic or educational value, and does not prevent the young and unknown artist from gaining recognition that fact should be plain after the other method has been tried. It has been said that the poorest judge of a picture is, after all, the man who painted it. He sees "bits" of interest to him that are not apparent to the casual observer. Similarly, the average artist is unable, according to the critics, to select from a group of his own canvases the one that is really the best. For these reasons the high character and usefulness of a non-jury exhibition seems questionable. The fact remains, however, that in the case of the academy exhibitions, there are usually something like 3000 pictures submitted. Naturally a severe weeding out process is resorted to, and as a consequence a great many pictures of merit are rejected. As a matter of fact not more than ten or fifteen per cent of those offered are hung. Another feature of academy exhibitions, which further narrows in number the selected pictures, is the privilege of the "blue ticket" which belongs to each academician. These pictures do not go before the jury and must be hung even to the exclusion of others equally meritorious. Obviously, something should be done to enable the younger artists to place their work where it will be seen.

No doubt these considerations have all been weighed by the organizers of the Society of Independent Artists, whose membership includes many men of repute—members of the National Academy and others—who need have no fear of the critical judgment of any jury. This fact only adds interest to the new movement, which, if successful, will undoubtedly give a very great stimulus to the painters' and sculptors' art, and thus serve a serious educational purpose.

We cannot escape the thought, however, that the same principle applied to architectural exhibitions would result in a serious lowering of standards by which the architectural development of the country is largely determined and controlled.

STUDENT ALUMNAE HALL. MOUNT HOLYOKE COLLEGE

MR. WALTER F. PRICE, *ARCHITECT*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

Second Conference of Public Art Commissions

The Department of the Art Jury of the City of Philadelphia is inviting the members of the Federal Commission of Fine Arts and of the State and Municipal Departments of Art of the United States to a conference to be held in Philadelphia on May 15th. This will be the second conference of such bodies, the first having been held three or four years ago on the invitation of the New York Art Commission.

The morning session will be held in Mayor Smith's reception room, City Hall. Those attending the conference will then be taken to Lynnewood Hall, the residence of Mr. Joseph E. Widener, president of the Art Jury, who will entertain them at luncheon. The afternoon session will also be held in Lynnewood Hall. Those attending the conference will be guests at dinner at the Ritz-Carlton. The first municipal departments of this kind were appointed in New York and Boston in 1898. In addition to the National Commission of Fine Arts there are now about five State Art Commissions and about twenty-five municipal ones.

Chicago Architectural Exhibition

The Thirtieth Annual Exhibition given jointly by The Chicago Architectural Club, The Illinois Society of Architects and the Illinois Chapter of The American Institute of Architects, with the co-operation of The Art Institute of Chicago, will be open in the galleries of the Art Institute, Chicago, April 5 to 29, both inclusive.

The Medal of Honor, given to a designer represented in this annual exhibition, will be awarded. Mr. Fritz Wagner, Jr., 2010 Peoples Gas Building, Chicago, is Chairman of the Joint Exhibition Committee.

Architects' League of Tennessee

At the annual meeting of the Architects' League of Tennessee, the following officers were elected: president, B. F. Cairns; first vice-president, W. C. Jones; second vice-president, H. T. McGee; secretary-treasurer, H. J. Reagan.

Plans are being perfected for an architectural exhibition, under the auspices of the League, early next Fall.

Washington State Society of Architects

A new architectural society with headquarters at Seattle, Wash., has recently been organized. It will be known as the "Washington State Society of Architects." The officers, who are all located in Seattle, are: President, A. Warren Gould; vice-president, H. H. James; secretary, W. J. Jones; treasurer, J. L. McCauley.

Electric Illumination of National Capitol

It is proposed to make permanent the electrical illumination of the Capitol, which formed so brilliant and memorable a feature of the inauguration. The installation has all been effected, and it can be maintained at an insignificant cost for current. The Capitol is one of the most beautiful buildings in the world, and its illumination gives it an unforgetable quality at night. As a patriotic inspiration this spectacle is unsurpassed.

It is understood that a sentiment already prevails among legislators to grant the authorization necessary to turn the current on nightly for this purpose. It should be accomplished if possible without delay. No disfigurement of the Capitol results and the picture which the great pile presents at night against the dark sky is beyond comparison one of the most thrilling things in America.

Days of anxiety and national strain are at hand. The patriotism of every American should be appealed to in all ways. By the use of a little electric current, costing the merest trifle, a symbol can be displayed nightly in the seat of government that will arouse the best Americanism. Apart from the artistic beauty of the spectacle this manifestation should be assured.—*Exchange.*

DETAIL OF SIDE ENTRANCE, GARDEN AT JENKINTOWN, PA.

MR. JOHN T. WINDRIM, *ARCHITECT*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

INDUSTRIAL INFORMATION

Saving a Craft

The Society of Architectural Iron and Bronze Manufacturers had as guests at their meeting at the Hotel Biltmore, on Thursday evening, March 22nd, a number of prominent architects and general contractors of the city of New York.

As explained by Mr. W. H. Winslow, President of the Society, the object of the meeting was to acquaint the guests with the problems which had confronted the members of the craft engaged in manufacturing ornamental iron and bronze, and the steps which had been taken to meet the unsatisfactory conditions facing them.

He further stated that certain erroneous impressions had arisen regarding the aims of the Society and that the Society felt that these could be cleared up much better by personal contact than by any circulars which might be sent out, for circulars were almost never read.

Following Mr. Winslow, Mr. C. A. Fullerton, Treasurer of the Society, outlined conditions existing in the craft preceding the formation of the Society some nine months ago. He first pointed out that the work of the craftsman was to interpret the conception of the architect and that therefore it was impossible for the architect to specify definitely either craftsmanship or art, due to differing ideals. This therefore brought about the condition where the architect naturally selected a few concerns with whom he was acquainted and whose work he knew about and invited them to bid for certain classes of ornamental iron and bronze. Here, again, difficulties arose because of the confusion in specifications of iron and bronze between artistic product and the strictly utilitarian built to definite dimensions. In the first category were doors, screens, etc., and in the second, stairs, windows and work of that character.

Due to these differing classes of work, and due to the differing ideals of the various craftsmen in that industry, it has been found quite difficult for various craftsmen to use the same basis of bidding on work.

This condition led to his suggestion that eventually the Society would have a central, highly trained, technical man who would classify by means of a quantity survey the ornamental iron and bronze called for in any architect's specification and that this quantity survey should then be furnished to the various members of the craft that the architect selected to bid upon the job. He went even further in his suggestion that possibly the time would come when each industry engaged in building work would have a special technical man to perform the quantity survey for its own individual part of the work, rather than as now, each one taking off their own quantities or leaving it to the general quantity surveyor.

These were some of the difficulties which had confronted the craft, but were not the most serious ones. These, in both his estimation and that of Mr. Winslow, arose from what might be termed "unfair competition, as produced by the buyer." Competition in which the buyer intimated to a bidder, whether on just grounds or not, that his prices were too high and that there would necessarily have to be a revision downward. Many cases were pointed out where the suggestion of the buyer was not in accord with the facts, as developed later. This condition of affairs led some of the more interested manufacturers to study the situation and eventually to secure the advice of Mr. Arthur Jerome Eddy, a prominent lawyer of Chicago, who had organized, in numerous industries, what is known as "The Open Price Idea." This idea was later explained by Mr. Eddy.

Mr. Fullerton went on to explain that he believed no architect or general contractor ever desired to have a producer furnish material except at a fair price, and with a reasonable profit. The danger, if such conditions did exist, was that skimping would result, that ideals would not be realized, that the craftsmanship would be lost, and the architecture of this country would be the sufferer.

The open price idea, as explained by Mr. Eddy and as adopted by the Society the Architectural Iron and Bronze Manu-

HENRY MORRIS NAGLEE MEMORIAL, SAN JOSE, CAL.

MR. R. TAIT M'KENZIE, *SCULPTOR* THE OFFICE OF PAUL P. CRET, *ARCHITECT*

Twenty-third Annual Exhibition—Philadelphia Chapter, A.I.A., and T-Square Club

facturers and other groups of manufacturers, is substantially as follows:—

Each bidder upon filing his bid with the architect, or general contractor, at the same time files a copy of that bid with the Secretary of the Society, which contains all the terms, conditions, etc., surrounding the bid. As soon as all the bids are submitted the Secretary sends out copies of them to each of the contesting bidders so that each one knows just what every other one is bidding, his price, and all conditions of the bid. The result of this dissemination of information is that each manufacturer ceases to distrust his competitor, who in reality should be his friend.

If architects and builders know of the open price arrangement, which, by the way, the Society is very desirous that they should, there will be no attempt to secure secret reductions of bids, or rebates in various ways, for each producer is in duty bound to file any changes in his original bid.

This arrangement will not, however, in any way hamper or deter the architect from calling any one, or all the bidders, telling them that their prices are beyond the amount which he is authorized to spend and asking them to suggest measures by which the cost of the work can be reduced to come within the amount which he feels justified in spending for this particular class of work.

It is designed to in no way hinder competition, nor permit combinations to set prices, which of course is illegal.

The result will be, as looked upon by the Society, that members will not be taking work which they had to furnish at less than cost, or else possibly skimp on, but that instead the whole tendency of the craft will be to bid honestly on the work which each one proposes to perform and thus the architect will secure for his client the utmost for the money, in both quantity and quality.

According to this scheme, as many or as few bidders as the architect desires can be called to bid and the same methods of selection and the same methods of competition will continue as at present. The only difference is that the bidders will be upon practically the same basis that they are now when bidding on public work where all bids are open and become public property instead of as now, where the architect keeps the result of each bid entirely from the knowledge of other bidders.

Mr. Eddy predicted that when the open price idea was thoroughly known by members of the profession it would be approved and appreciated by them and would result in the same lasting good to both architect and craftsmen that similar organizations have secured in the railroads and other industrial fields.

After Mr. Eddy finished his remarks a number of the guests asked questions to clear up certain points which were somewhat hazy to them. One or two of the architects present rather felt that the matter was one of price fixing, but the explanations seemed to assure them on this point.

The concluding talk of the evening was made by Ex-Senator Clark, who gave a few reminiscences regarding his early life, his life in New York and his life in connection with the bronze industry.

PALAZZO ANTINORI, FLORENCE, ITALY

(Attributed to Boccio d'Agnolo)

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, APRIL 11, 1917 NUMBER 2155

SOUTHERN YELLOW PINE FOR STRUCTURAL PURPOSES

By SAMUEL J. RECORD

Assistant Professor of Forest Products, Yale University

DURING the decade from 1906 to 1915, inclusive, the reported lumber cut of southern yellow pine has amounted to the enormous total of 138,000,000,000 board feet. The maximum production was reached in the year 1909 when the returns showed over 16,250,000,000. The production for the past four years has remained fairly constant, averaging somewhat above 14,500,000,000. This is about 40 per cent of the total of all lumber cut in the United States and about half of the softwood production. It is more than three times the cut of Douglas fir, which is the nearest competitor to southern yellow pine.

Southern yellow pine was for many years better and more favorably known in foreign countries than in the principal markets of this country. For the last twenty years, however, it has furnished the larger part of the timber used for building purposes in America, while the demand from all portions of the world makes it our leading export wood.

The extent of the southern pineries is so great that only a rough approximation can be made of the amount of standing timber. In 1909 the U. S. Bureau of Corporations estimated that the total stand of privately owned southern yellow pine in Alabama, Arkansas, Florida, Louisiana, Mississippi, Texas and portions of Georgia, Missouri, the Carolinas and Virginia was over 384,000,000,000 board feet. If one includes the timber publicly owned and that outside the limits of the estimate, makes some allowance for growth since that investigation, and deducts the lumber cut, the result indicates a total stand of some 325,000,000,000 feet. Assuming this figure to be approximately correct, it follows that the present rate of consumption will virtually exhaust the supply in less than 25 years. In reality, southern pine will be with

LOG SECTION, SOUTHERN YELLOW PINE

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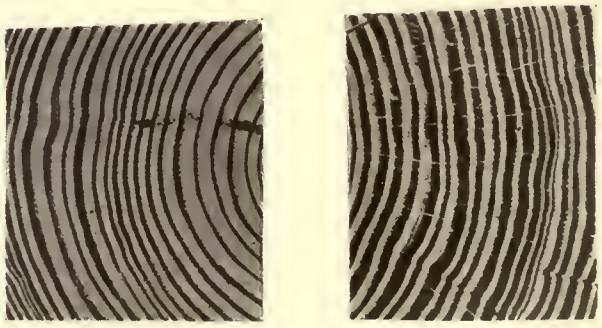
STANDING SOUTHERN YELLOW PINE

us much longer than that, if not indefinitely, for with waning supply will come closer utilization and conservation, while the second growth will increase in importance.

The name southern yellow pine is a collective term and comprises several species of pines growing in the southern states from Virginia to Texas. The three most important are the longleaf (*Pinus palustris*), the shortleaf (*Pinus echinata*), and the loblolly (*Pinus taeda*). Associated with these in comparatively small amounts are certain others of which Cuban or slash pine (*Pinus caribaea*) and pond pine (*Pinus serotina*) are of chief value. From a botanical standpoint the various species of trees are distinct but for commercial purposes the woods are placed in one group. Exhaustive tests have demonstrated that such grouping is entirely legitimate if the material is graded according to quality.

Chief among the southern pines is the longleaf. It grows for the most part in great stands from which almost all other tree growth is excluded and forms a belt from 125 to 200 miles wide along the Atlantic and Gulf coasts from southern Virginia to eastern Texas. The tree is variously known, but its most common names are longleaf pine, Georgia pine, and yellow pine. In the export trade it is commonly known as pitch pine. The mature tree is of excellent timber form, tall, straight and clear. The wood is the heaviest, hardest and most resinous of the group. About 55 per cent of the present stand of southern pine is of this species, but the proportion will steadily decrease because of the comparatively small amount of second growth.

Shortleaf pine is the name commonly applied in trade to both the true shortleaf and loblolly in distinction to longleaf. The ranges of the two trees overlap in many places and for the most part lie to the north of the main longleaf pine belt. The true shortleaf is a tree of the plains and foothills. On extensive areas from Maryland southward and westward to the Mississippi it occurs as second

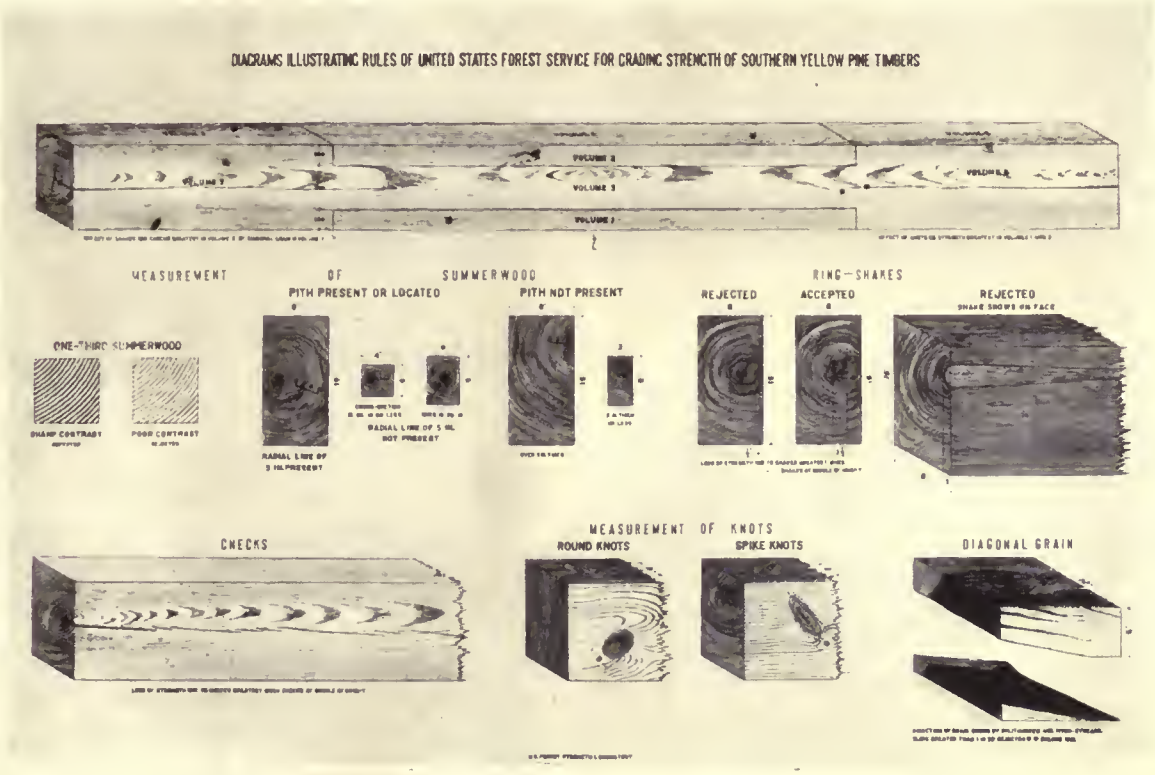


SOUTHERN YELLOW PINE

Same rate of growth, but one contains a much larger proportion of dense summer wood and is consequently heavier and stronger than the other.

growth, both in pure stands and mixed with hardwoods, and in the Gulf states and the central Mississippi Basin it forms a large proportion of the remaining virgin southern yellow pine. The wood is more variable than longleaf and less so than loblolly. In its southern range it averages about as hard as longleaf while wood grown in the more northern regions or at higher altitudes is moderately soft. The present stand is estimated to be at least 80,000,000,000 board feet.

Loblolly pine is extensively distributed.



ILLUSTRATING RULES OF UNITED STATES FOREST SERVICE

East of the Mississippi it is a tree of the low pine barrens and their swampy borders and farther back from the coast is found on the tablelands of northern Mississippi, Alabama, Georgia, and South Carolina. West of the Mississippi there are heavily timbered areas of this species in Arkansas, Louisiana, and in Texas as far as the Colorado River. The lumber known as "North Carolina pine" is of this species. The tree grows under diverse conditions which affect its form, size, and the character of its wood. At its best it is an excellent timber tree producing lumber of high grade though usually coarser grained than longleaf and shortleaf. A considerable proportion of the cut is from second growth stands which produce wood of mediocre quality, usually coarse and open grained, knotty, and perishable under exposure. The present supply of this timber may be roughly estimated at 60,000,000,000 board feet.

The woods of the southern pines, though exhibiting wide variation, have much in common, especially so when growing under favorable forest conditions. Longleaf, as a whole, is the hardest and closest grained, loblolly the coarsest and most variable, and shortleaf is intermediate. The yellowish white sapwood, widest in loblolly and narrowest in longleaf, is quite distinct in appearance from the reddish brown heartwood. The annual layers of growth are prominent and show very plainly the two bands corresponding to the early growth of the season and that formed later in the year. The spring wood is composed of thin-walled cells, light in color and deficient in weight and strength. The summer

wood is made up of very thick-walled cells with consequent hardness, density and strength. These alternating hard and soft bands make the wood less easy to work than even-textured material such as white pine.

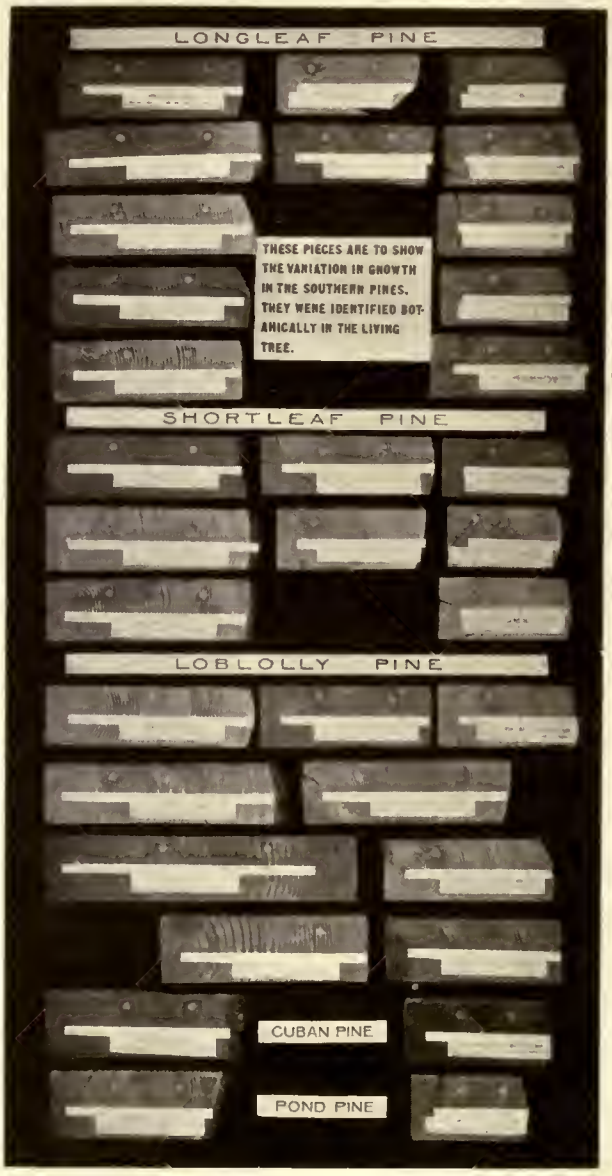
The proportion of spring and summer wood varies not only in different species

LOG POND AND MILL

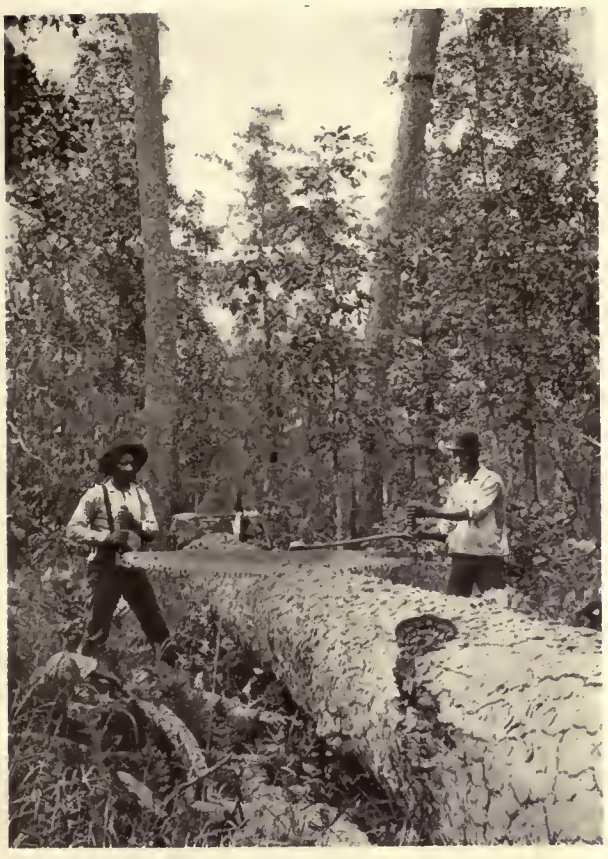
but also in different parts of a tree and even on the same cross section. It is evident that, in equally sound timber, the larger the relative amount of dense summer wood the harder, heavier and stronger the specimen will be. This factor, consequently, becomes very important in the selection for strength and hardness or for softness and ease of working.

It was formerly customary to grade southern pine timber with reference only to defects. No account was taken of variation in strength due to the inherent qualities of the wood. This was not serious at a time when timber was so plentiful and cheap that only the best was cut, and engineers and builders were able to obtain structural timber of the highest quality. Gradually, however, the whole situation has changed. Timber of intermediate and poor quality comes into the market along with the high class material. The need for better grading rules and methods of inspection has been recognized for many years. To make specifications and plans for structures intelligently the qualities of the materials must be known. Otherwise reasonable prudence demands that working stresses be calculated on the basis of the weakest material that is likely to be obtained under the methods of grading and inspection in use. Manufacturers of yellow pine complain about the lack of uniformity of building codes which prescribe allowable fiber stresses and especially about the very low values permitted by some cities, but only recently have they taken the necessary measures for classifying and standardizing their product. Now that they have done this they are in position to urge revision of codes and practice to conform to the qualities assured by the new classification.

The new grading rules for southern


LONGLEAF PINE
THESE PIECES ARE TO SHOW THE VARIATION IN GROWTH IN THE SOUTHERN PINES. THEY WERE IDENTIFIED BOTANICALLY IN THE LIVING TREE.
SHORTLEAF PINE
LOBLOLLY PINE
CUBAN PINE
POND PINE

VARIATIONS IN GROWTH OF SOUTHERN PINE



SAWING SHORTLEAF PINE LOG
Near Pine Bluff, Jefferson County, Ark.

yellow pine timber are based upon the density of the material, and apply without distinction as to species to longleaf, shortleaf, loblolly, Cuban, and pond pine. Defects are taken into account not only as to size, number and character, but also with particular reference to their location in the stick and probable effect upon its strength. Two classes of timber are designated, namely, dense southern yellow pine and sound southern yellow pine.

In the latter group are included pieces without any ring or summer wood requirement. For a timber to be classified as dense it must show on either end an average of at least six annual rings of growth per inch of radius as measured from the third to the fifth inch, inclusive, from the pith, and the rings measured must contain at least one-third summer wood. Timbers with fewer than six rings to the inch are acceptable provided the proportion of summer wood is not less than 50 per cent. It is also required that the contrast in color between the two portions of the growth ring shall be sharp and the summer wood dark in color, except in pieces exceeding considerably the minimum requirement of summer wood. There are also rules for measuring the rings in small timbers and in those which do not contain the pith.

These rules have been adopted by the American Society for testing materials and by the Southern Pine Association. The association is also urging all manufacturers and dealers to brand their timbers in accord with the new grades and classification as a guarantee of quality to buyers and consumers.

The grading of wood according to its strength and other mechanical properties does not take into consideration the relative resistance of the material to the influences which produce decay. So long as dry timbers are kept dry they will have no chance to rot. On the other hand, if

TIMBER LOADING DOCK OF THE LARGEST SAWMILL IN THE WORLD
Has a Daily Capacity of One Million Board Feet

yellow pine is used in contact with the ground or in moist places or where the air is stagnant and humid it becomes of great importance either to select naturally durable material or to treat the other kind properly with antiseptics.

In selecting southern pine for natural durability sapwood should be considered a defect. The common belief, however, that heartwood is stronger than sapwood *per se* is not well founded. Such differences in strength as may exist in sound timber are due to the period of life and the relative vigor of the tree's growth. All heartwood was at one time sapwood

and the transformation involved no increase in wood substance. The change does have a marked effect on the resistance of the wood to decay. This resistance varies, roughly, with the amount of fixed resinous matter in the wood. Thus one piece of heartwood with a minimum of resin will rot quickly upon exposure to adverse conditions while another piece thoroughly impregnated with resin will

SAWING SOUTHERN YELLOW PINE LOGS

resist decay very much longer. This is probably due to the exclusion of water from the wood and not to any poisonous properties of the resin. Some recent experiments by Zeller indicate, also, that in heartwood of the southern pines the factor of density is not only a safe guide as to strength but also as to lasting power. Hence there is no occasion for using perishable timber in contact with the ground or exposed to moisture.

As an object-lesson in the improper selection of timber may be cited the case of a seven-story building in Chicago, where floor timbers, alleged to be "longleaf pine from the South," have rotted so badly after being in place only four years that some of them have had to be replaced and the extent of the damage may prove very serious. That the lumber interests are strongly opposed to such misuse of wood and have no hesitation in openly condemning such practice is shown by the fact that *The American Lumberman* (April 22, 1916) contained a full description of this particular case under the title "Inferior Timber an Argument for Substitutes." From the caption of a cut showing in natural size a cross section of one of the rotten timbers the following is quoted: "A very striking example of the kind of material that ought not to be cut into timbers under any circumstance and that is not fit for use in any place where durability is a consideration." If the new grading rules are effectively applied there need be no occasion for such inferior material being unwittingly employed.

Had the perishable wood been impregnated with suitable preservative the question of durability from decay would have been solved. Mudsills and beams on foundations, basement planking, stringers and other structural parts may be creosoted to secure permanence and stability. Such timbers, if given an empty cell treatment and exposed to the air for some time before being put in place, will have little, if any, objectionable odor. In situations where for any reason the use of creosote is considered undesirable zinc chloride may be successfully employed. With increasing use of second growth pine for structural purposes the matter of preservative treatment will demand much greater attention than is now devoted to it.

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MR. E. F. GUILBERT (OF MESSRS. GUILBERT & BETELLE), *ARCHITECT*

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MR. E. F. GUILBERT (OF MESSRS. GUILBERT & BETELLE), *ARCHITECT*

ENTRANCE DETAIL

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DETAIL

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MR. E. F. GUILBERT (OF MESSRS. GUILBERT & BETELLE), *ARCHITECT*

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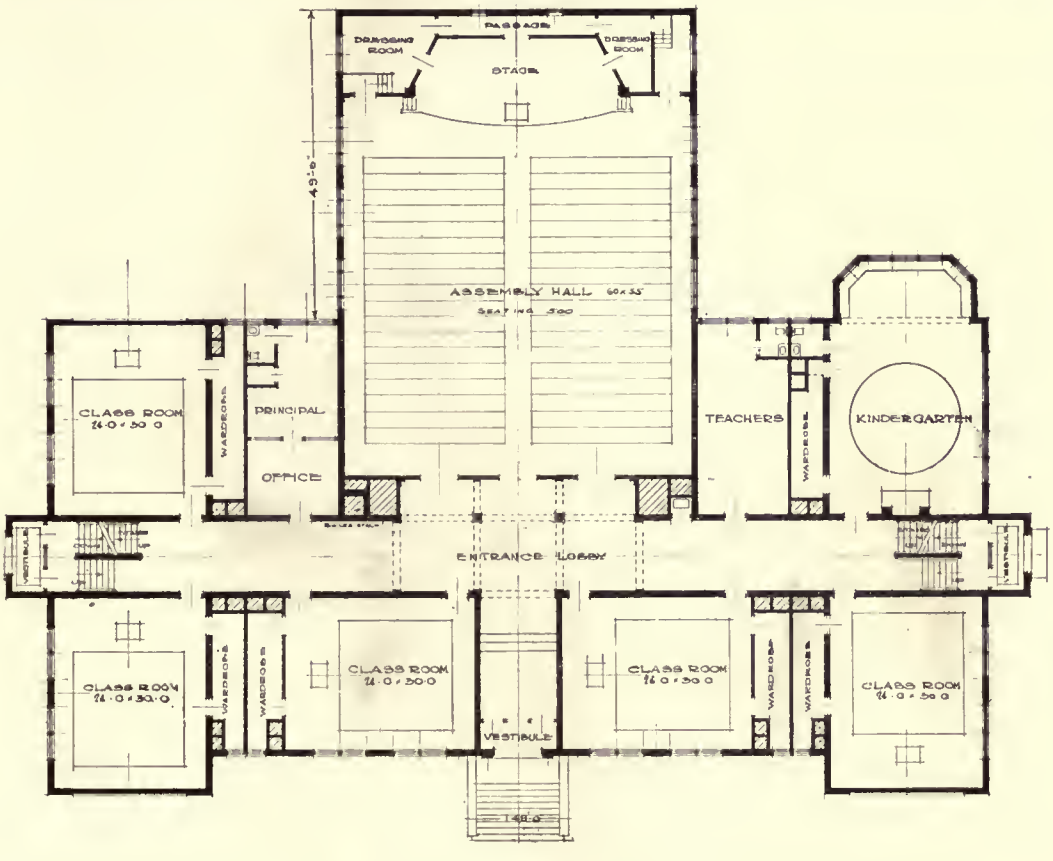

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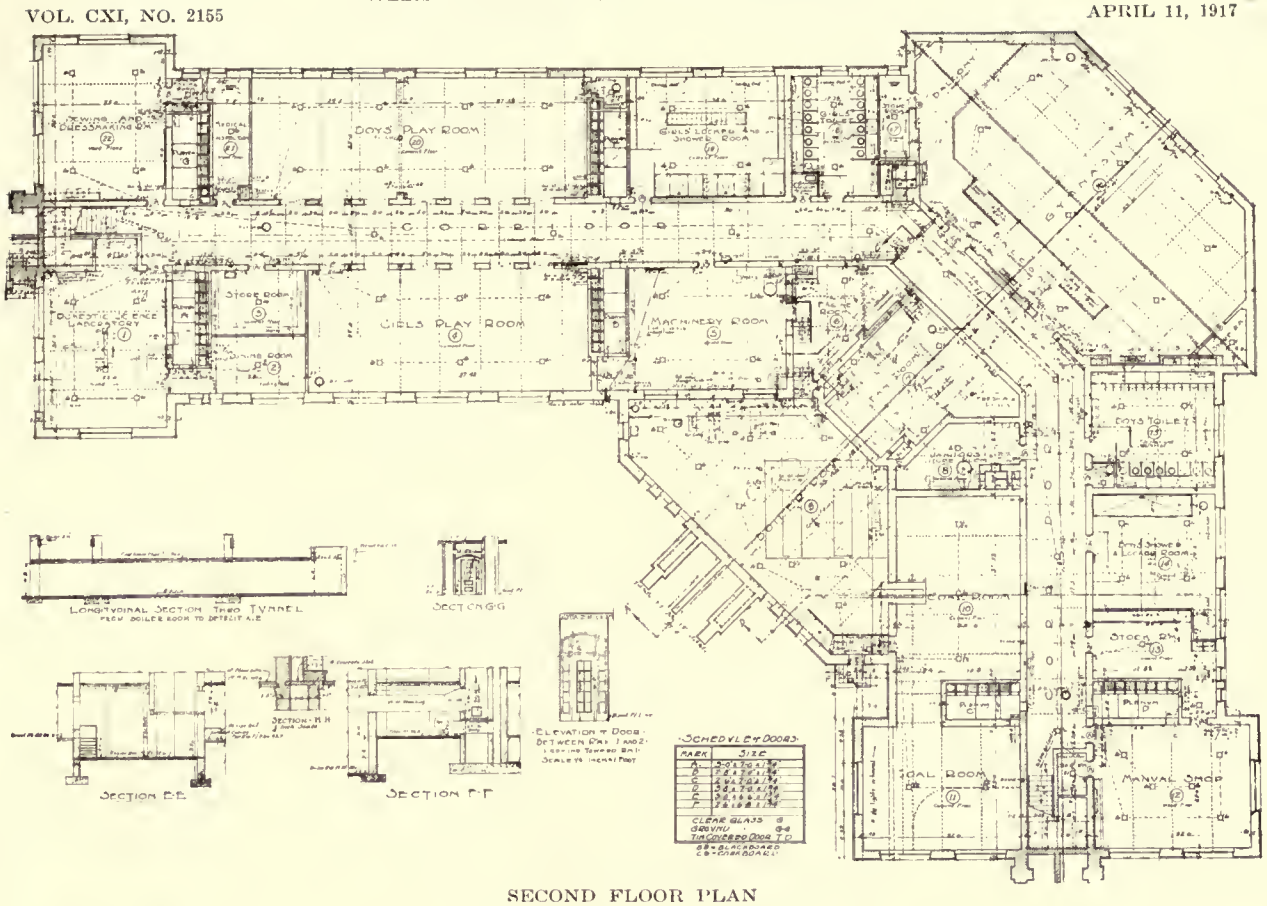
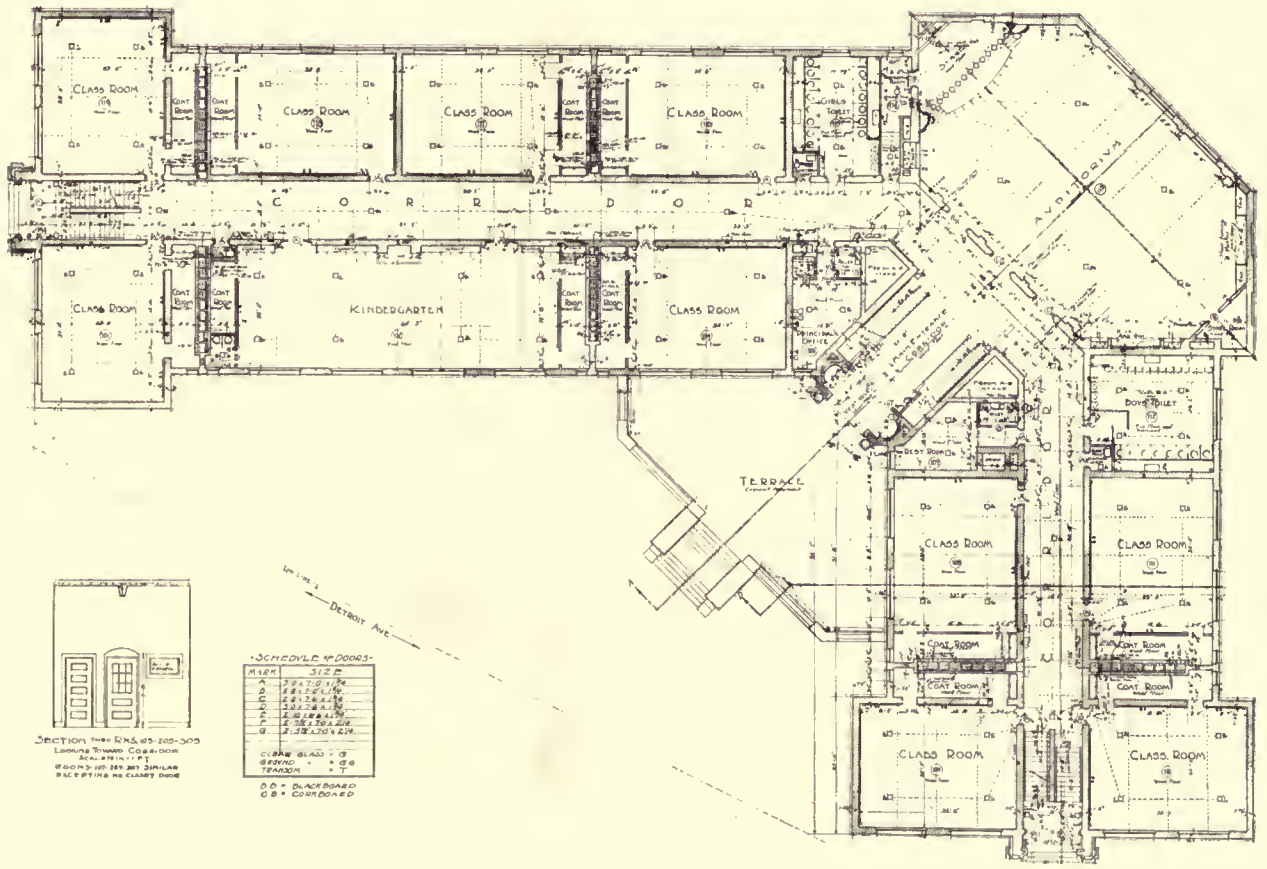


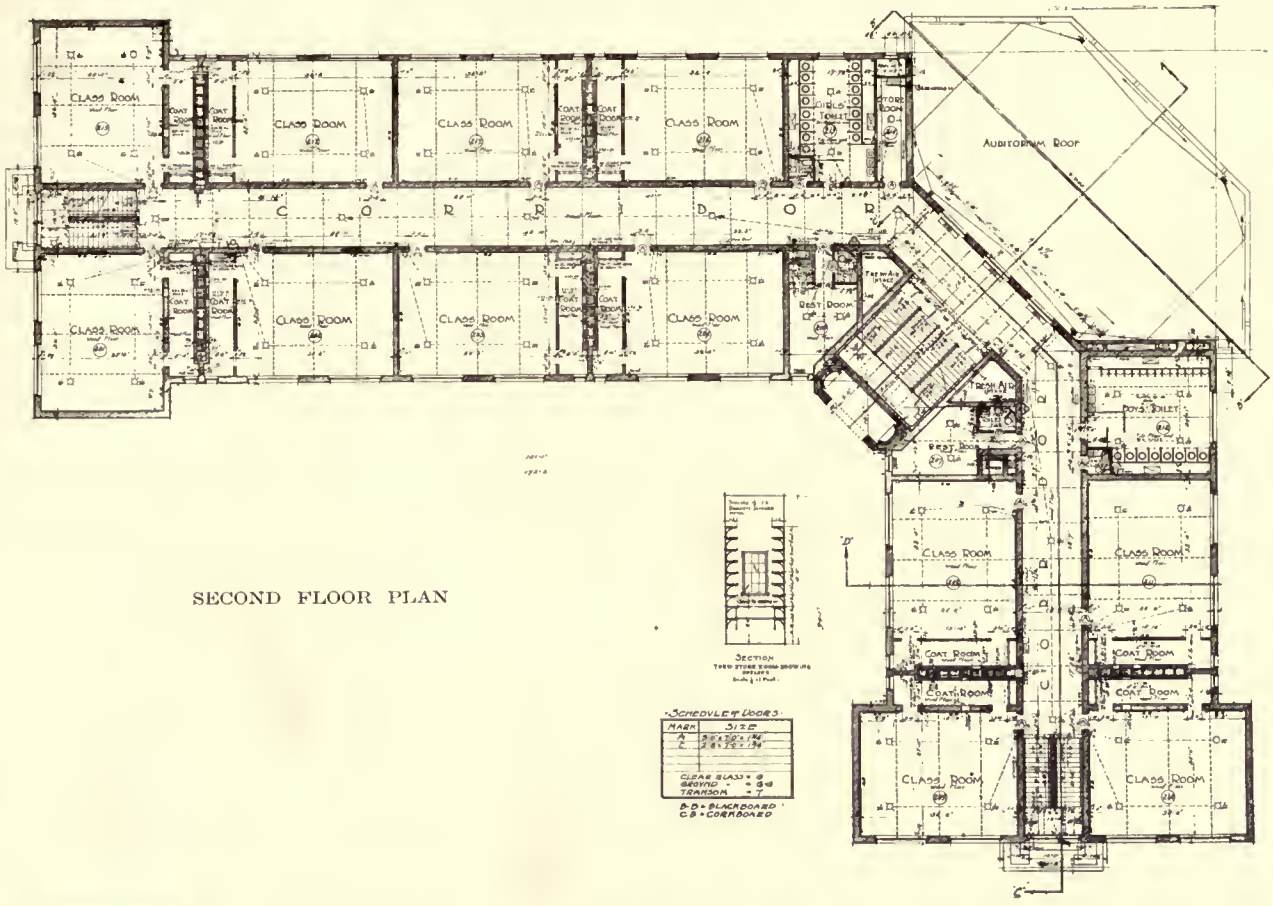
SECOND FLOOR PLAN



FIRST FLOOR PLAN

LINCOLN SCHOOL, TOLEDO, OHIO

MR. EDWIN M. GEE, *ARCHITECT*



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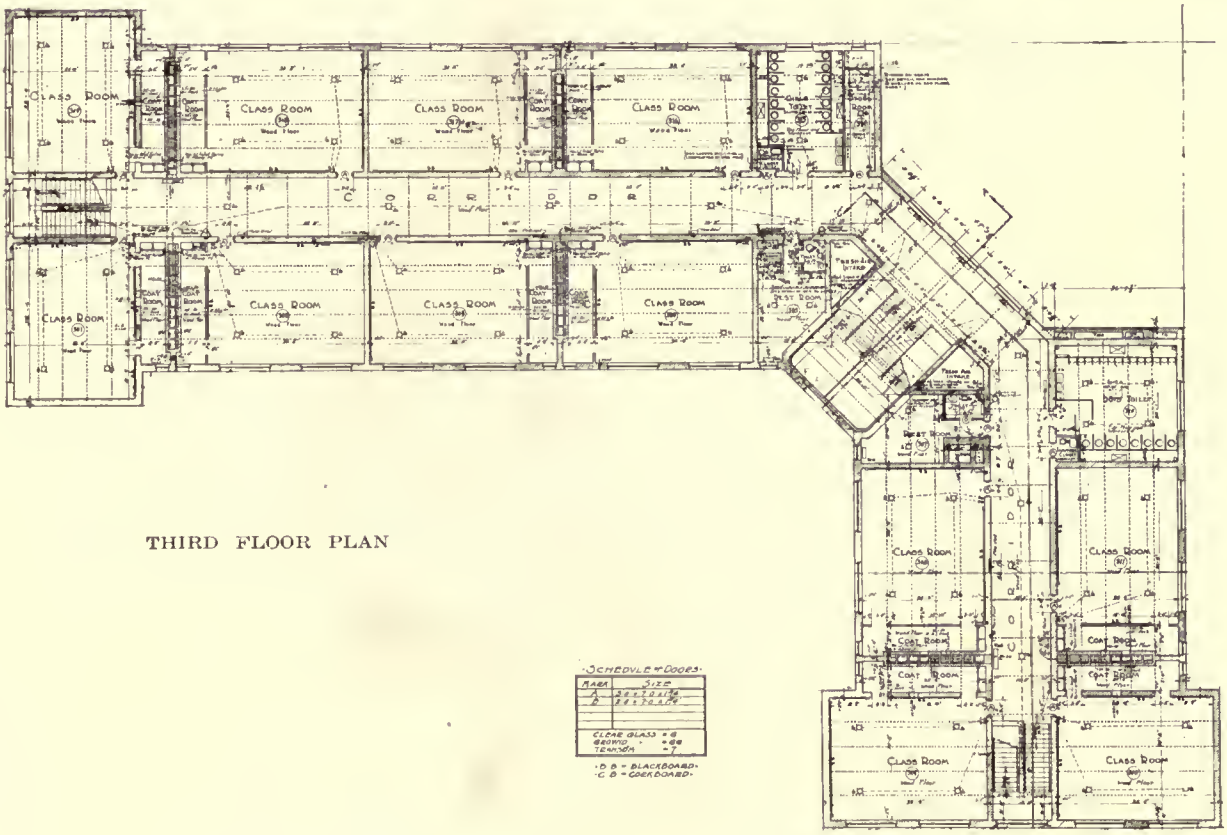


THIRD FLOOR PLAN

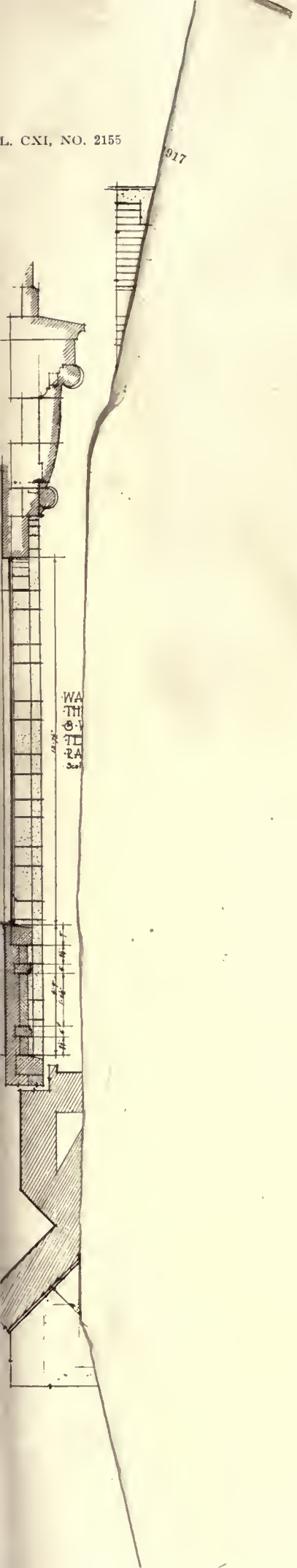
LINCOLN SCHOOL, TOLEDO, OHIO

MR. EDWIN M. GEE, *ARCHITECT*

ABOVE, KINDERGARTEN ROOM; BELOW, AT LEFT, A TYPICAL CLASS ROOM; BELOW, AT RIGHT, DOMESTIC SCIENCE ROOM

LINCOLN SCHOOL, TOLEDO, OHIO

MR. EDWIN M. GEE, *ARCHITECT*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ST. JOHN'S CHAPEL

ST. JOHN'S Chapel, located on Varick Street, now presents an unusual opportunity to associations and individuals interested in the early architecture of this country to contribute to its preservation. Some two or three years ago the widening of Varick Street endangered this structure, and as a result of widespread protest and the co-operation of Trinity Parish, the owner of the structure, the portico, which projected beyond the line of the street after its widening, was taken over by the city, and the sidewalk arranged to pass under it. The agreement which was then entered into between the city and the owner of the chapel has now expired, and it is understood that since the chapel is useless for church purposes, Trinity Parish is disinclined to longer maintain the structure. In its present condition of dilapidation and decay there seems to be little hope of preserving the building, without the earnest co-operation of public-spirited citizens of means. A substantial sum would be required to restore it and maintain it permanently. The chief engineer of the Board of Estimate, in a recent report, states that little interest appears to have been manifested in the preservation of this building. Such a statement is little less than a reproach against our materialism.

There are so few examples of architecture belonging to our Colonial period still in existence on Manhattan Island that it would seem to be our duty to conserve them by every means possible. Failure to do so will not only result in the artistic impoverishment of our city in a comparatively brief period of time, but it will provide foreign critics, who already question our appreciation of art, with indisputable evidence to support their contentions.

It is probably too much to expect the owners to do anything. In spite of the wealth of the parish and the general impression that education, art and religion are closely related, there has been little disposition shown by this corporation to contribute to art unless the ends of religion are also served. It seems possible, in fact, that it is largely the result of accident that a number of the churches and chapels belonging to this parish constitute the best examples of architecture in the city.

CONTRACTS BETWEEN ARCHITECTS AND THEIR CLIENTS

THE statement has frequently been made that fewer than ten per cent of the agreements under which architects render professional services are expressed in writing. Such a condition, if it exists, is not only one of danger but it seems to indicate lax business methods. Certain it is that cases in which architects have undertaken important work on mere verbal orders are numerous, and not infrequently the resulting misunderstanding has occasioned loss to one party or the other. A number of these in which there appeared serious disagreements have been submitted to the courts for adjudication. A case decided in February of this year by the Supreme Court of Minnesota only illustrates again the unwisdom of trusting to memory or the ability to establish the terms of an agreement without a written document. In this instance the owner admitted that he had employed the architect to make sketches for the structure, but denied that

he had entered into a definite arrangement with him to make working plans and specifications and to superintend the construction of the building. The architect, on the other hand, claimed that he was regularly employed to render complete architectural services, and entered suit on that basis. In deciding against the architect the court held that when it is understood between the parties that the entire agreement is to be put in writing, the fact that it was never written out and executed is strong presumption of no contract at all; that the writing of the contract is a condition precedent to its completion.

It seems to be a usual practice for the average architect to enter into a mere verbal agreement with an owner to prepare sketches and procure preliminary estimates for a building. At a subsequent interview, perhaps, he will agree to proceed to another stage and prepare working drawings and specifications, and procure actual estimates. At a later time the owner may possibly instruct him to let contracts and supervise the work. When the work is finally completed or even if the operation is halted at any one of the successive stages, it is frequently difficult to establish the basis upon which the work has been done. In fact, it is this loose and haphazard method of agreement between architect and owner that leads to a majority of the misunderstandings and resulting suits at law by which architects endeavor to secure compensation for services rendered. A definite understanding and written agreement before any work is undertaken, with supplemental modifications, additions or revisions mutually agreed upon as occasion arises, would prevent these disputes or render their determination comparatively simple and inexpensive. It is to be hoped that architects will soon come to a realization of this fact in the interest not only of their own incomes, but as a measure that will result in better feeling on the part of the public, and a higher regard in general for the architect's business ability.

A TEST OF THE ZONING LAW

FROM present indications it appears that the anxiously awaited test to determine the constitutionality of New York's new zoning law is not far distant, and that it will be made under almost ideal conditions, for both parties to the controversy are possessed of unlimited means. To be specific, it is reported that Lord Astor, an ex-American of great wealth, is appealing to the Board of Estimate against the restrictions that the law places upon some of his property. Arrayed against him are owners of property in the Murray Hill section of almost equal wealth who are looking upon the law as a new and powerful ally in the fight they have been waging for years to preserve the character of this portion of the city. Presumably Lord Astor's petition will be denied and it is stated as his intention in such an event to take the case to the courts on the ground that the law is confiscatory. Under these conditions it seems reasonable to suppose that the test will be decisive. Either the old principle of private rights will be upheld or else in establishing the constitutionality of the law the newer theory that private rights must yield to the public welfare will be affirmed in a manner that will prevent future controversies based on similar grounds. The courts in a number of states have already sustained restrictions of private rights such as are involved in our zoning law, holding, in effect, that it is a proper use of the health powers reserved to every state and city to be used in any manner believed to be necessary for the protection of the public health.

When the New York zoning law was in course of preparation, the greatest possible attention was given to its legality. Where there was any question in the minds of the framers regarding the lawfulness of a desired provision it was omitted rather than permit the question to stand. Under these circumstances it seems probable that there need be little apprehension regarding the outcome of the test to which the law seems about to be subjected.

Current Architectural Press

THE February issue of *The Architectural Review* is mainly devoted to illustration of Golf Club Houses of recent construction. The descriptive article is by Mr. George C. Nimmons.

There can be no doubt, as Mr. Nimmons states, that the increasing popularity of the game of golf has brought to architects and landscape gardeners most attractive and pleasant problems.

The examples selected to illustrate Mr. Nimmons' article are an interesting lot and present large suggestive value. Other illustrations in this issue are of a house at Overbrook, Pa., by Thomas H. Atherton, Jr., and the entrance detail of a house in Atlantic City, N. J., designed by Ford, Butler & Oliver.

Mr. W. W. Kent continues his series on early architects; the present article treating of Baldassare Peruzzi. We are informed that Peruzzi was architect, painter and engineer, a combination not so rare in the sixteenth century, when the designer of an important structure super-

(*FROM ARCHITECTURE*)

HOUSE OF ARTHUR CURTISS JAMES, ESQ., NEW YORK

MESSRS. ALLEN & COLLENS, *ARCHITECTS*

intended its every detail from foundation to dome.

The illustrations accompanying this article give added interest to the text.

* * *

A number of well-designed country houses, a meeting house and a church, all by Heacock & Hokanson, are illustrated in *The Western Architect* for February. Other features are: a town house in San Francisco, by Sylvain Schnaittacher; a stucco house in Cincinnati, by C. G. Burroughs; a store and office building in

(*FROM ARCHITECTURE*)

GREAT HALL, RESIDENCE, ARTHUR CURTISS JAMES, NEW YORK

MESSRS. ALLEN & COLLENS, *ARCHITECTS*

Winetka, Ill., by Chatten & Hamilton, and an office building in Chicago, by Mundie & Jensen. The text consists of a reprint of Mr. R. Clipston Sturgis' admirable paper, delivered before the recent convention of the Institute in Minneapolis, as supplementary to the report of the Committee on Education.

* * *

The house of Arthur Curtiss James, on Park Avenue, New York, Messrs. Allen & Collens, architects, is the principal subject illustrated in *Architecture* for March.

This constitutes an important addition to New York's stately houses. Particularly does the Great Hall suggest the dig-

nified Elizabethan mansion. The treatment throughout has been handled in a most satisfactory way.

Houses as costly as this one necessarily lose something of the quiet and retiring features of domesticity. They are, in a sense, show places. Yet the architects have been able to combine, with the large rooms and high ceilings, a certain domestic atmosphere that is often lacking in pretentious houses.

(FROM THE ARCHITECTURAL RECORD)

READER'S PLATFORM AND ORGAN FRONT—FIRST CHURCH OF CHRIST SCIENTIST, ROCHESTER, N. Y.
GORDON & MADDEN AND WILLIAM G. KAELBER, *ARCHITECTS*

Mr. Egerton Swartwout's series on the Classic Orders of Architecture is, in this issue, advanced to its sixth installment, treating of the Corinthian Order.

* * *

The March issue of *The International Studio* is the twentieth anniversary number. The leading article, "Retrospect and Impression," is contributed by Eliot Daingerfield, artist painter. It is an intelligent survey of the field of art in this country, and well worth reading. Frank W. Purdy contributes "Some Impressions of American Sculpture," and, in his summing up shares with Mr. Dainger-

(FROM THE ARCHITECTURAL RECORD)

MAIN ENTRANCE—FIRST CHURCH OF CHRIST SCIENTIST, ROCHESTER, N. Y.
GORDON & MADDEN AND WILLIAM G. KAELBER, *ARCHITECTS*

field in an optimistic and hopeful view of the future of art.

Frank Alvah Parsons also contributes to this series of reviews of various fields of art during the past two decades, and he also is disposed to hopefully regard the progress being made towards a realization of our decorative ideals.

It is good to learn from men so well qualified to speak with authority on their various topics that we are slowly, but none the less surely, mounting to higher

(FROM THE ARCHITECTURAL RECORD)

SUNDAY SCHOOL ROOM—FIRST CHURCH OF CHRIST SCIENTIST, ROCHESTER, N. Y.
GORDON & MADDEN AND WILLIAM G. KAELBER, *ARCHITECTS*

planes. The usual reviews of exhibitions and the illustration of recent important work of painters, sculptors and craftsmen are presented.

(FROM THE ARCHITECTURAL REVIEW)

DETAIL OF ENTRANCE—HOUSE OF W. L. MAC COY, ESQ., OVERBROOK, PA.
THOMAS H. ATHERTON, JR., *ARCHITECT*

In *Good Furniture* for March there are continued the various serial articles, all, as usual, well illustrated. The numerous

(FROM THE WESTERN ARCHITECT)

GERMANTOWN MEETING HOUSE, GERMANTOWN, PA.
HEACOCK & HOKANSON, *ARCHITECTS*

interiors shown in this issue are witnesses to the improvement that has taken place in the furnishing and decoration of the American home during recent years.

* * *

Some unusual features in both design and plan were incorporated by the architects, Gordon & Madden and William G. Kaelber, in the First Church of Christ Scientist, Rochester, New York, illustrated in the March issue of *The Architectural Record*. These have been, in a certain sense, described by Mr. I. T. Frary, in an accompanying article.

A very pronounced effect of color has been secured, we learn, and the result

(FROM THE ARCHITECTURAL REVIEW)

DETAIL OF ENTRANCE—HOUSE AT ATLANTIC CITY, N. J.
FORD, BUTLER & OLIVER, *ARCHITECTS*

would seem to be satisfactory. This feature is, of course, not shown in the black and white reproductions and its description is therefore justified. The somewhat studied reference to the features of design and plan, while doubtless interest-

ing and instructive to the lay reader are, in view of the very complete illustration, of small value to an architect.

The series on "English Architectural Decoration," by Alfred E. Bullock, which reaches its second installment in this issue, treats of the seventeenth century period. This series has a certain practical value, and should encourage a development of better craftsmanship in this country.

A number of recent hospital buildings are illustrated. They are the work of

(FROM THE INTERNATIONAL STUDIO)

"CORNER OF A MONASTERY AT YAROSLAVL"
By VADIM FALILEIEV

Kendall Taylor & Co. and show a full appreciation of the requirements. In the Portfolio of Current Architecture, there are illustrations of gardens and of a number of suburban houses. The details of these will be found in our index to the current architectural press.

* * *

The leading article in *The Architectural Forum* for February is a book review by H. D. Upman. The subject is "The Work in Architecture of Robert and James Adams," published in London last spring. The illustrations are taken from the book. William A. King discusses at length certain legal questions and deci-

(FROM THE ARCHITECTURAL FORUM)

HOUSE OF ALBERT RATHBONE, ESQ., 45 EAST 78TH STREET, NEW YORK, N. Y.
A. C. JACKSON, *ARCHITECT*

(FROM THE ARCHITECTURAL FORUM)

DOREMUS MEMORIAL GYMNASIUM, WASHINGTON AND LEE UNIVERSITY, LEXINGTON, VA.
FLOURNOY & FLOURNOY, *ARCHITECTS*

sions affecting architectural practice, and Harold V. Walsh, instructor in the Architectural School of Columbia University writes of "Ways to Gain Practical Knowledge in Architecture."

In spite of the recent change of name, the various buildings illustrated in this issue of *The Architectural Forum* are constructed principally of clay products.

Perhaps the most interesting subject illustrated is a gymnasium at Worcester (Mass.) Academy by Peabody & Stearns. There is also shown a gymnasium at Washington and Lee University, designed by Flournoy & Flournoy.

Other subjects are a Christian Science Church at Roxbury, Mass., designed by Shepley, Rutan & Coolidge; an office building of an unusual but commendable type by Bertram G. Goodhue; a fraternity house at Amherst, Mass., by Putnam & Cox, and suburban houses by Walker & Weeks and Howard Shaw.

PERSONALS

Mr. Ernest O. Brostrom, architect, Kansas City, Mo., announces that he has opened offices for the practice of architecture in the Reliance Building, that city.

It is announced by Mr. G. Wesley Stickle that he has opened offices in the Palace Hardware Building, Erie, Pa., for the practice of architecture and would like to receive manufacturers' catalogs and samples.

Mortimer E. Freehof and David L. Solomon have opened an office at 620 Carlton Avenue, Brooklyn, for the practice of architecture, under the firm name of Freehof & Solomon, and invite catalogs, samples and general literature.

Mr. Thomas C. Young of Eames & Young, architects of St. Louis, Mo., and Mr. Alfred H. Granger, formerly of Frost & Granger, architects of Chicago, Ill., announce that after April 1, 1917, they will be associated for the practice of architecture. They will be known as Eames & Young, Wright Building, St. Louis, Mo., and Granger & Young, 332 South Michigan Avenue, Chicago, Ill.

It is announced that Messrs. Charles M. Scripture and Grover M. Pratt, architects, will open an office at 405 Ohio Building, Akron, Ohio, as associate architects, and will be pleased to receive manufacturers' samples and catalogs.

Mr. Philip S. Avery, architect, announces the removal of his offices from 120 Tremont Street to the Unity Building, 185 Devonshire Street, Boston, Mass., and would be glad to receive manufacturers' samples and catalogs.

Texas State Architects' Association

It is reported that W. J. Smith, of Galveston, Texas, has been elected as fifth vice-president of the Texas State Architects' Association, to succeed the late Harry E. Davis. Mr. Smith was appointed to fill this office temporarily on the death of Mr. Davis recently, and the appointment has now been made permanent.

Architects of Galveston are said to have also organized a local association, with Walter S. Murdoch as president and W. J. Smith as secretary.

A School Building Standardization Committee

John H. Donovan, of Oakland, Cal., William B. Ittner of St. Louis, and C. B. J. Snyder of New York, comprise the trio of architects appointed by the department of school administration of the National Educational Association, to act as a committee on the standardization of planning and construction of school buildings. It will be the duty of this committee to secure all available data and to tabulate and report the results of their labors.

Virginia Chapter A. I. A.

The following officers for the ensuing year were elected at the recent annual meeting of Virginia Chapter, A. I. A.: William C. Noland, president; Eugene Bradbury, vice-president, and W. N. Mitchell, secretary-treasurer.

INDUSTRIAL INFORMATION

Filing Cabinets

The Shaw-Walker Company, Muskegon, Mich., has issued a catalog and price list illustrating in detail the steel and wood filing cabinets of which this company is the manufacturer.

Particular emphasis is laid upon the strength of these cabinets which, it is claimed, are "built like a skyscraper." The steel cabinets are constructed without bolts, screws, rods or rivets, the various parts being welded together with an electric welding machine. It is stated that all drawers will run silently and smoothly for a hundred years without repair or attention. This prophecy is based on the long life and exceptional character of the slide which is used in the Shaw-Walker cabinets. The carriage runs on ten case-hardened roller bearings that have beveled edges.

All types and sizes of filing devices are manufactured, together with various supplies used in them.

Copy of the catalog will be sent to architects upon request.

O'Brien Products

The O'Brien Varnish Company, South Bend, Ind., has recently issued a very attractive folder in which are bound a number of catalogs, pamphlets and other forms of trade literature designed to place before the architect in the most usable form material that will be of interest and value to him in the practice of his profession. One of the folders is published under the caption, "Why Architects Specify O'Brien Liquid Velvet." In this brochure are illustrated a number of interiors of buildings where this product has been used, and the color schemes, tone effects and general considerations of interest in selecting varnishes are discussed. The story of Liquid Velvet is printed, from which it develops that the specifications under which it was produced were: An easily applied wall covering that would be a veritable enamel coating for walls and ceilings—one which could be produced in a wide range of tones for any decorative scheme, and which would be washable while possessing unusual durability and versatility. It is claimed that this product meets this broad and exacting specification.

Another product — O'Brien Master Varnish—is described as the triumph of 40 years of varnish making. It is said to be unaffected by water; that it can be immersed for days without marring its appearance in any way, and that even boiling water can be poured over it without turning it white.

A number of letters from users of O'Brien Products are reproduced, and give evidence of the satisfaction which has attended their adoption. A list of public buildings and hospitals in which these materials have been used is also appended.

Copies of this folder will be furnished to architects upon application.

Hoffman Valves

The Hoffman Specialty Co., 130 North Fifth Avenue, Chicago, Ill., has issued a catalog describing Hoffman Venting Devices. These include a siphon air valve, a vacuum valve, an air line valve, a quick vent air valve, a quick vent "float" air valve, a quick vent "float" air and vacuum valve, and a return line valve.

It is stated that the designer and patentee of these valves has been actively identified with the heating business in all its phases for the past thirty years, and for fifteen years has been devoting his entire thought and energies toward the development and production of venting devices for low pressure steam heating systems. He has realized the demand for dependable venting devices which would be non-adjustable and still automatic in the performance of their various functions, and it has been with the idea of meeting this demand that the valves illustrated were produced. The duty of each valve is fully described in the catalog, as well as the mechanism of the valve itself.

Copy of catalog will be furnished upon request.

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THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, APRIL 18, 1917 NUMBER 2156

THE BUSINESSMAN-ARCHITECT

By S. J. T. STRAUS*

[NOTE.—*Of late years the architect, in addition to his services in planning and superintending the construction of a new building, has often found himself in a position where he must be of assistance to his client in its financing. In recognition of the importance of this vital preliminary to construction, and because of the increasing frequency with which they are being consulted in regard to it, several large architectural firms have established business departments which are at the service of their clients.* THE AMERICAN ARCHITECT *feels that a need exists for a discussion of the various phases of this subject. The Editors have, therefore, secured a series of authoritative articles which will appear from time to time and give information which it is hoped will prove of value to the architect in practice.*]

IT IS a commonplace of architectural knowledge that American business has revolutionized business-architecture during the last generation; yet it is perhaps true that comparatively few architects realize the real revolution that a considerable part of the profession itself has undergone as a result of this development. For years the main concern of the architect was solely with the artistic side of his profession, and the main works of his brain and hand were churches, public buildings and private residences—structures in which utility often bowed to beauty.

But now it is fair to say that at least the great majority of the architect's work in the United States consists in the designing of business buildings — vast buildings whose prime object, after all, is to obtain the greatest return in dollars and cents for the capital invested. As a result, more and more architectural firms are making an intensive study of the business of architectural designing as distinguished from the art; more and more frequently have they founded their success on ability to advise with clients and assist builders and owners to obtain the best returns from their investment.

One of the leading firms of architects in the country attributes its growth to the fact that the man at its head is an able financier and an unusually capable businessman. In the early stages of the firm's work, this architect, realizing that before a building can be erected financial arrangements must be made, interested banks and other financial institutions in the various projects for which his firm drew plans. Through whole-hearted financing co-operation with his clients, his name soon became identified with a large proportion of the commercial buildings erected in the country.

Every commercial proposition submitted to this architectural firm is thoroughly gone over by him. He estimates the income from the building and the expenses of operation. He determines the owner's financial capacity, that is, his ability to take care of the charges not included in the architect's cost of the building, such as interest on a loan, vacancies and the inevitable extra charges which will come up when the building is nearing completion. If some idiosyncrasy of the owner is reflected in the building to its disadvantage, he endeavors to show his client in dollars and cents why this should be eliminated.

He is the final authority in this firm, with the owners who know him, on mat-

* Mr. S. J. T. Straus is connected with a Chicago banking house, which has specialized for many years in constructions loans. As a consequence he is thoroughly familiar with the business end of architecture, and speaks with authority.

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ters referring to the commercial problems in a building. Alterations suggested by him to increase the income return are often regarded of more importance than the artistic considerations influencing his associates. In numerous instances, propositions that, from his knowledge and experience he knows would not be successful, have been discouraged, even though the owners were of ample means and fully able to finance the project.

This man is an excellent example of the businessman-architect. His success in this work is proof that an opportunity undoubtedly exists today in business-architecture. Much of the uncertainty shown by owners in financing matters, and a great many commercial failures, could be eliminated by the architect's active assistance commercially throughout the planning of a building. Oftentimes his successful co-operation in this connection means that a tentative project will be crystallized into actual construction work. It is, therefore, to his interest that he be prepared to furnish this service when he is called upon by his client.

The businessman-architect should understand, first of all, what constitutes a profitable enterprise from the standpoint of the owner and incidentally of the loaning institution which will provide a portion of the capital and must be convinced of the merit of the project. He must be able to determine what would be the proper improvement for a particular location; the demand for a certain class of building must be gaged accurately so as not to contribute to such errors as a loft building calling for rentals of seventy cents a square foot where forty cents is the maximum, or expensive high grade apartments in a neighborhood where stove heat is not uncommon, or vice versa. He should understand the basis for estimating values of the various classes of property. He should keep in close touch with the active market in real estate, knowing what properties would have the best sale and their market prices. He must know up to what point a piece of property may be improved, and that a great mistake is made in over-improvement, even on a valuable piece of property, because a large improvement on a small lot eliminates the two most necessary requirements of a tenant, light and air. In other words, he must be able not only to plan and judge the architectural features in connection with a building, but combine this with the commercial aspects as well. He must realize that it is the business and financial considerations which determine the ultimate success of a commercial building.

Propositions will be submitted to the architect by careless promoters or real estate men who have discovered that some one is ready to sell a lot which could advantageously be improved or replaced by a more modern structure. Desiring to put up the largest building possible on the land, they hurry through the preliminary stages with little real thought for the proper improvement of this particular spot. After the sketch is made, the proposition is submitted to a bank or other financial institution for the purpose of securing a loan. Being in an indefinite shape, it does not appear especially attractive to the loaning institution, and consequently an unfavorable decision is reached. Under such conditions, the architect is in a difficult position. However, it is often to his advantage to take the bolder course—to insist that the proposed building project be thoroughly worked out, and that the plans be very definite and well studied. Thus he may avoid the annoyance and loss of time, and even reputation, involved in drawing plans for a building which, subjected to investigation, shows itself to be inexpedient and unprofitable in the long run. These are the points into which a loaning institution inquires very closely, and the architect should do likewise.

In this connection, an instance or two in the experience of the businessman-architect mentioned previously will illustrate the point:

"A man walked into this office not long ago," he relates, "with plans for an office building. The district was one of heavy land value and it was my opinion, after an investigation, that our client was not contemplating an improvement of sufficient size in proportion to the earning possibilities of the land. I suggested the

addition of two stories to the building so that, compared with the increased income derived, the added capital invested would bring him a more profitable return; thus the overhead expenses per square foot, which were rather heavy with the building as originally planned, were materially reduced and it was a more satisfactory business proposition all around.

"In another case a man came to me with a proposition for a six-story fireproof apartment building with elevators. Preliminary sketches were made, but I was not satisfied that such a building would be successful. The neighborhood was ill suited to the building, being situated at a considerable distance from the center of the city, with unsatisfactory transportation facilities. In addition, the entire plan appeared to me as being visionary and one which would never get to the point of erecting a structure—perhaps never even getting to the point of paying for plans and specifications. A conference was held in which the disadvantages were pointed out to the owner. There was no escaping them, and he dropped the building project. This was a case in which I feel we gained rather than lost. It often happens that an architect does not escape blame for the erection of an impractical building, even in cases where he is entirely without fault. We did not think it advisable for our firm to be associated with a building which would be a poor investment. A thorough investigation and a conservative attitude on the part of an architect will often prove a check on impractical builders, which conserves his reputation and, in the long run, makes money for his firm."

Often the architect will see an opportunity for enlarging on his client's ideas, as instanced by another architect:

"I was once consulted by an experienced builder who contemplated the erection of a ten-story hotel upon a lot owned by him. This man had already planned to lease the building at a substantial figure to a responsible hotel man, and considered that he had what would prove to be a very successful proposition, as he would clear 9% net. The entire project was worked out complete in every detail, and as far as it went, was quite satisfactory. I happened to know that the neighborhood of the proposed improvement was peculiarly adapted for an apartment-hotel. From carefully estimated figures we could see where our client could increase this yield by changing the character of his building to that of apartments operated on the hotel plan. The facts were submitted to him, and the subsequent erection of this type of building vindicated our judgment."

Often the architect's activities will go even further. A certain Chicago architect was offered an opportunity to purchase on a decidedly advantageous basis a corner bordering on the downtown loop. The architect believed that a building for light manufacturing, if erected on the property, would fill a genuine need and prove profitable. Through his influence, therefore, a syndicate to erect such a building was formed, the purchase of the land and a portion of the cost of the proposed building being financed by disposing of stock. A first mortgage bond issue loan covering the balance of the cost was readily obtained, and the building soon became a reality. The financial success of the project more than justified the architect's judgment.

The above instances are proof of the fact that an opportunity is open to architects in business-architecture.

In succeeding articles it is the intention to discuss more fully the principles underlying the development of successful business buildings.

BIRD'S-EYE VIEW, SHOWING PROPOSED PLAN OF ENLARGEMENT OF STEVENS INSTITUTE OF TECHNOLOGY AT CASTLE POINT

MESSRS. LUDLOW & PEABODY, *ARCHITECTS*

THE WILLIAM HALL WALKER GYMNASIUM

MESSRS. LUDLOW & PEABODY, *Architects*

(*For illustrations see plate section*)

THIS building marks a departure from the usual gymnasium plan. Elliptical buildings are not common and at first thought, when the architects set themselves to solve the problem of the best possible gymnasium, the usual rectangular form naturally suggested itself.

A local condition, however, pointed to an unusual premise in this problem and that was the shape of the plot of ground on which the gymnasium is to be built. This plot lies between diverging lines, and it was realized that a rectangular building would be a most uncomfortable fit for this trapezoidal piece of ground.

A second condition of the problem was the fact that an exceptionally good running track seemed to be most desirable.

A third condition which, in importance, perhaps comes first, is that the greatest efficiency should be obtained at the minimum of cost compatible with first-class construction and suitable appearance.

Study proved that the elliptical form answered all of these requirements in rather surprisingly complete fashion. That this form adapts itself to the plot is obvious; that it was logical to build an elliptical wall around the necessarily elliptical running track is also obvious; that economy would be effected

was not so clear at the outset, for a wall built on a curve costs more per unit than a straight wall, but careful analysis and the drawing of different types of plans upon which estimates were obtained, proved that this was the case.

One reason for this economy was on account of the fact that the desired floor area could be enclosed by less lineal feet of brick wall by the elliptical form than with this in mind, a large part of the first floor is devoted to a practice room which, with the inclusion by means of folding partitions of the exercise room and boxing room, gives a space one hundred and ten feet long with a twelve-foot ceiling, for baseball battery practice, football formation work, jumping and the like. The second or main gymnasium floor will be used for basket ball,

MESSRS. LUDLOW & PEABODY, *ARCHITECTS*

the rectangular; another was that the oval shape in itself was so interesting architecturally that little in the way of embellishment was required. The exterior is of variegated deep-toned red brick with raked-out joints, and the trim limestone and terra cotta. The roof is of variegated slate.

The plan was developed on the premise that general athletics more than mere gymnastics were to be encouraged, and lacrosse practice, putting the shot, pole vaulting, etc., while a special room is provided on the first floor for boxing and fencing.

The running track is planned ten feet in width, thus permitting the passing of runners, necessary in competitive events, and also providing an ample gallery for spectators. Windows range along the greater part of the track and, as the oval wall conforms to its shape, the usual

dead corners are eliminated and a track unusually attractive to the runner is the result.

It might be added that the curvature is not a true ellipse, but is composed of arcs of circles struck from two centers. This affects considerably the cost of construction as a continually varying radius requires more time and labor in laying out and executing the work.

The track floor has the usual concave contour and is covered with cork carpet.

To obtain an abundance of daylight, the gymnasium floor and running track receive light from a forty-foot ventilating oval skylight, as well as from the track windows already referred to.

The height of the gymnasium room to the underside of the trusses will be 27 feet, 6 inches, and to the roof at the ridge 38 feet.

It is planned that the exercise room on the first floor will take care of all but the largest classes in gymnastics and setting up exercises, such as chest weights, dumbbells, etc., thus leaving the gymnasium floor proper for a large proportion of the time available for more strictly athletic purposes, games, etc. This room will also be available for dances or other gatherings.

The facility of administration and supervision of such a building is an important matter, and the entire arrangement of plan must often be controlled by its requirements. In this case the physical director will have not only his administration room on the first floor near the entrance, but an examination room on the second floor and connected with it a control room overlooking the gymnasium floor through glazed sash.

The locker rooms are all on the first or ground floor with ample light and air from windows above grade. The faculty locker room is immediately in the left of

INTERIOR OF GYMNASIUM

THE WILLIAM HALL WALKER GYMNASIUM, STEVENS INSTITUTE OF TECHNOLOGY, HOBOKEN, N. J.

MESSRS. LUDLOW & PEABODY, *ARCHITECTS*

THE WILLIAM HALL WALKER GYMNASIUM, STEVENS INSTITUTE OF TECHNOLOGY, HOBOKEN, N. J.

MESSRS. LUDLOW & PEABODY, *ARCHITECTS*

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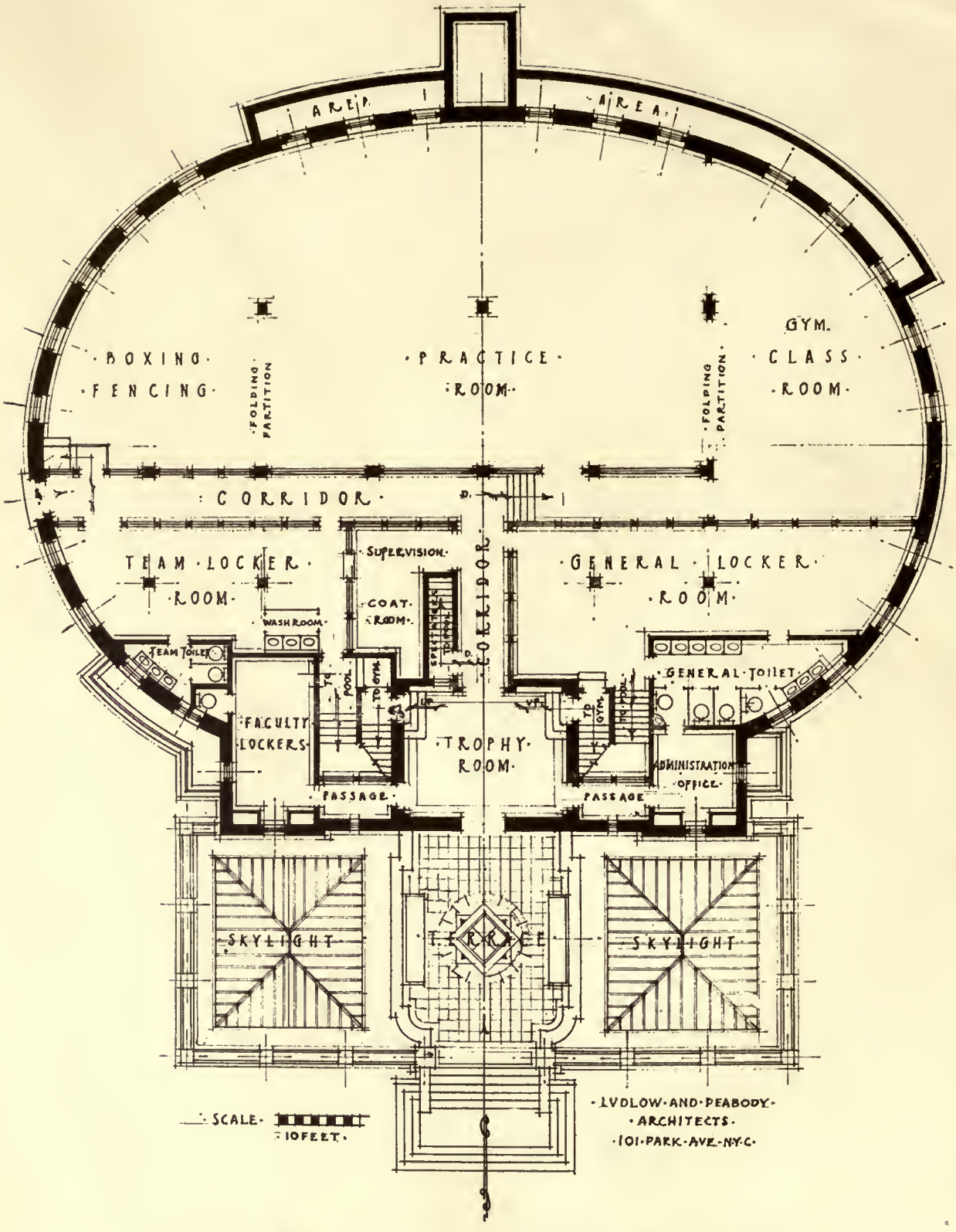

THE WILLIAM HALL WALKER GYMNASIUM, STEVENS INSTITUTE OF TECHNOLOGY, HOBOKEN, N. J.

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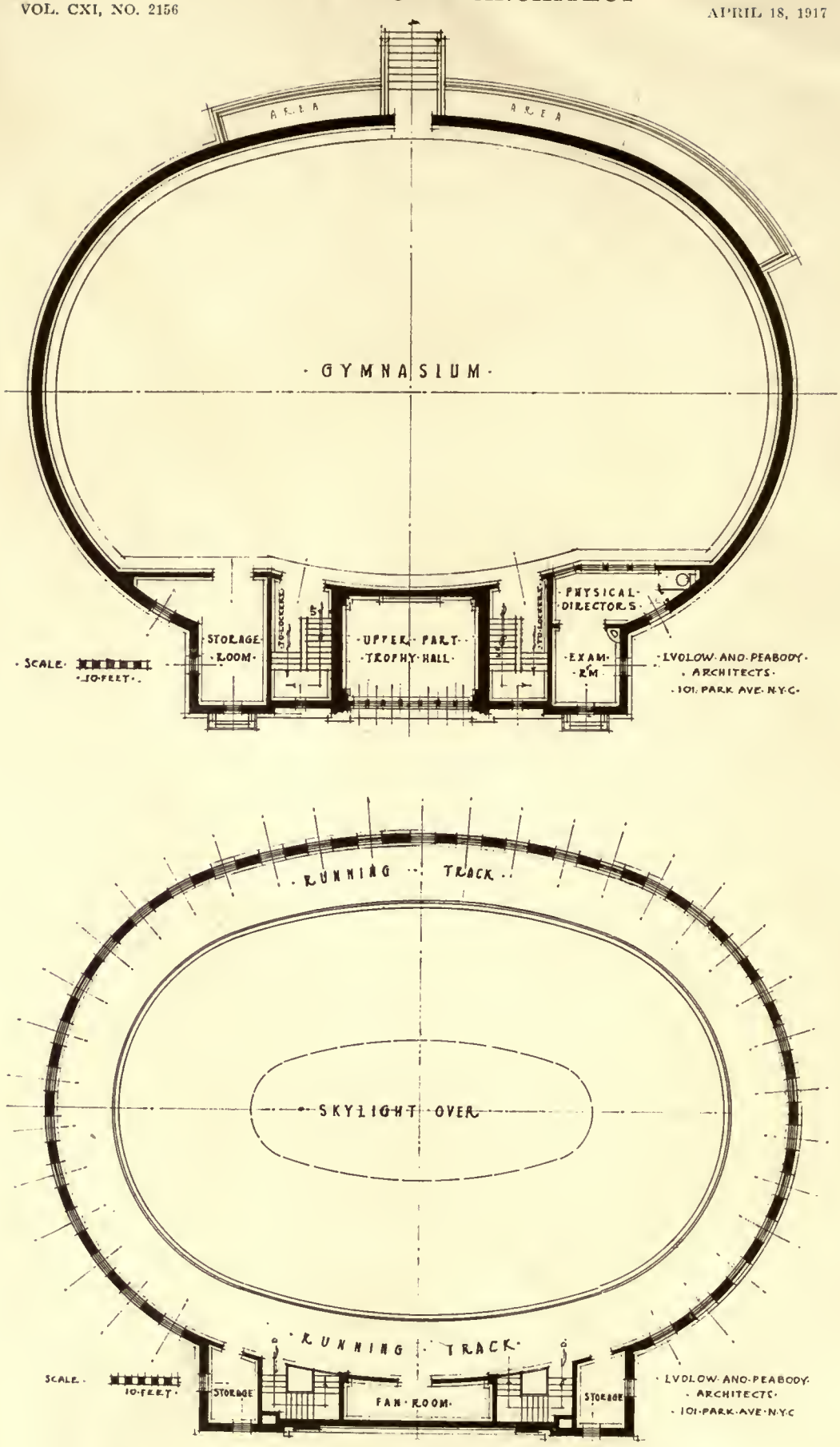

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MESSRS. LUDLOW & PEABODY, *ARCHITECTS*

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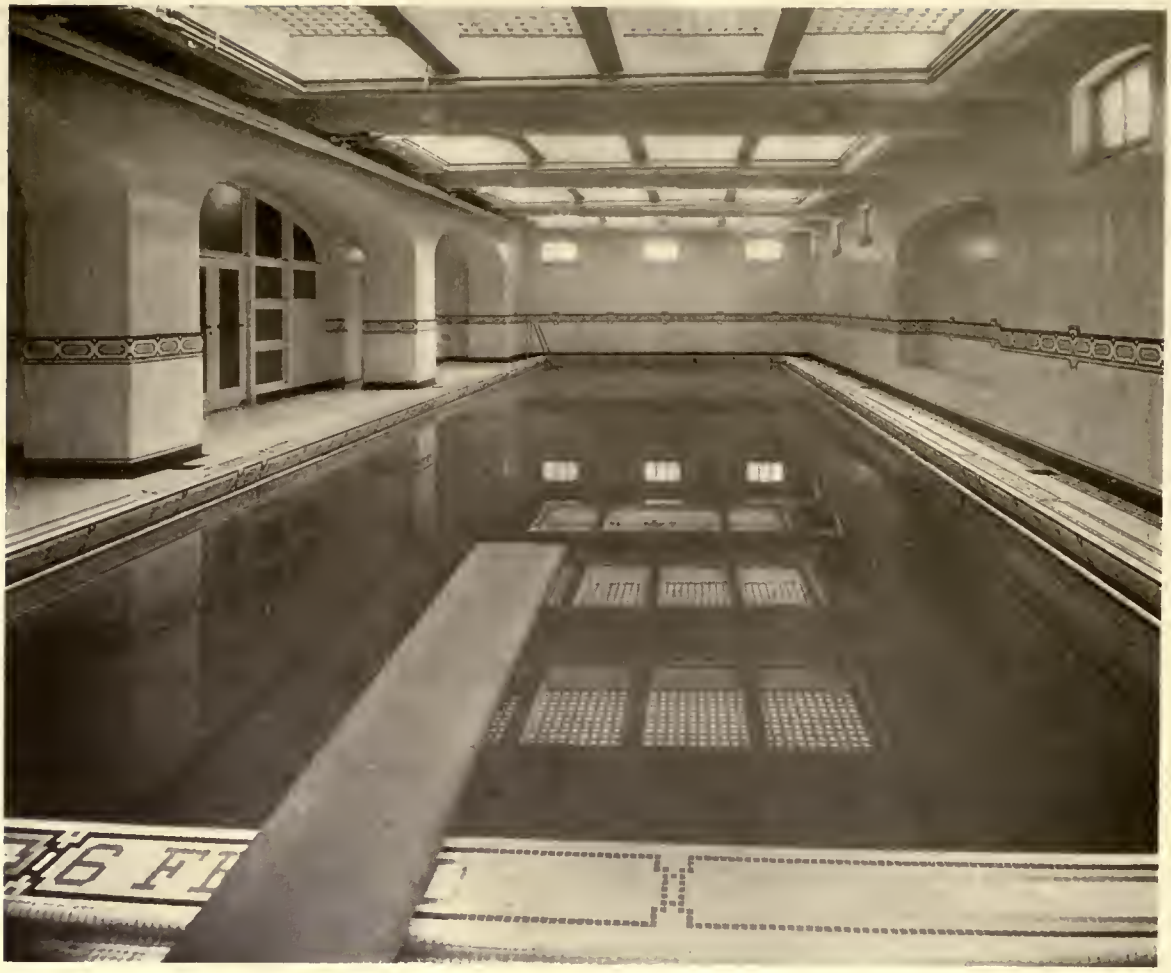

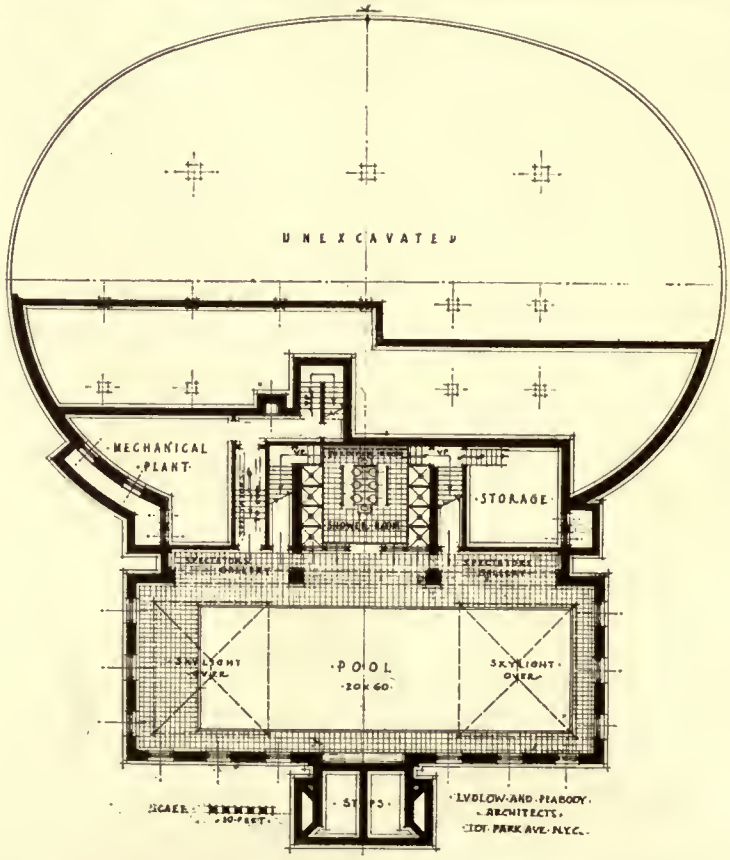

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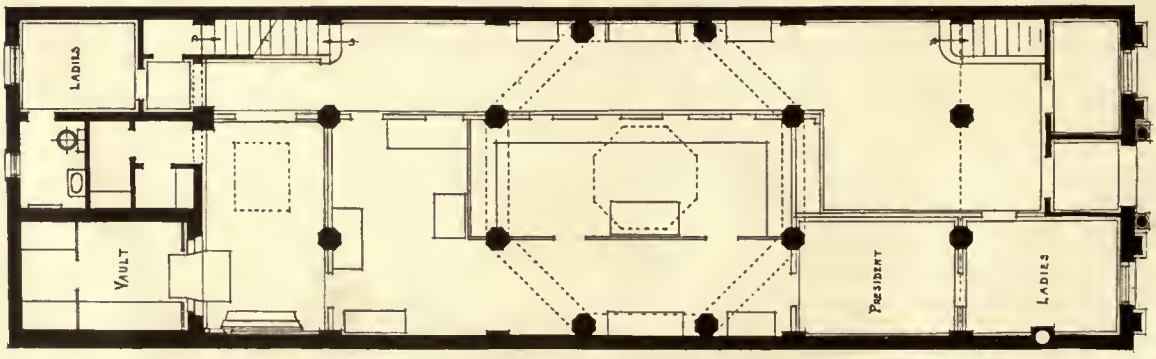


PUTNAM TRUST CO., GREENWICH, CONN.

MR. F. A. WRIGHT, *ARCHITECT*

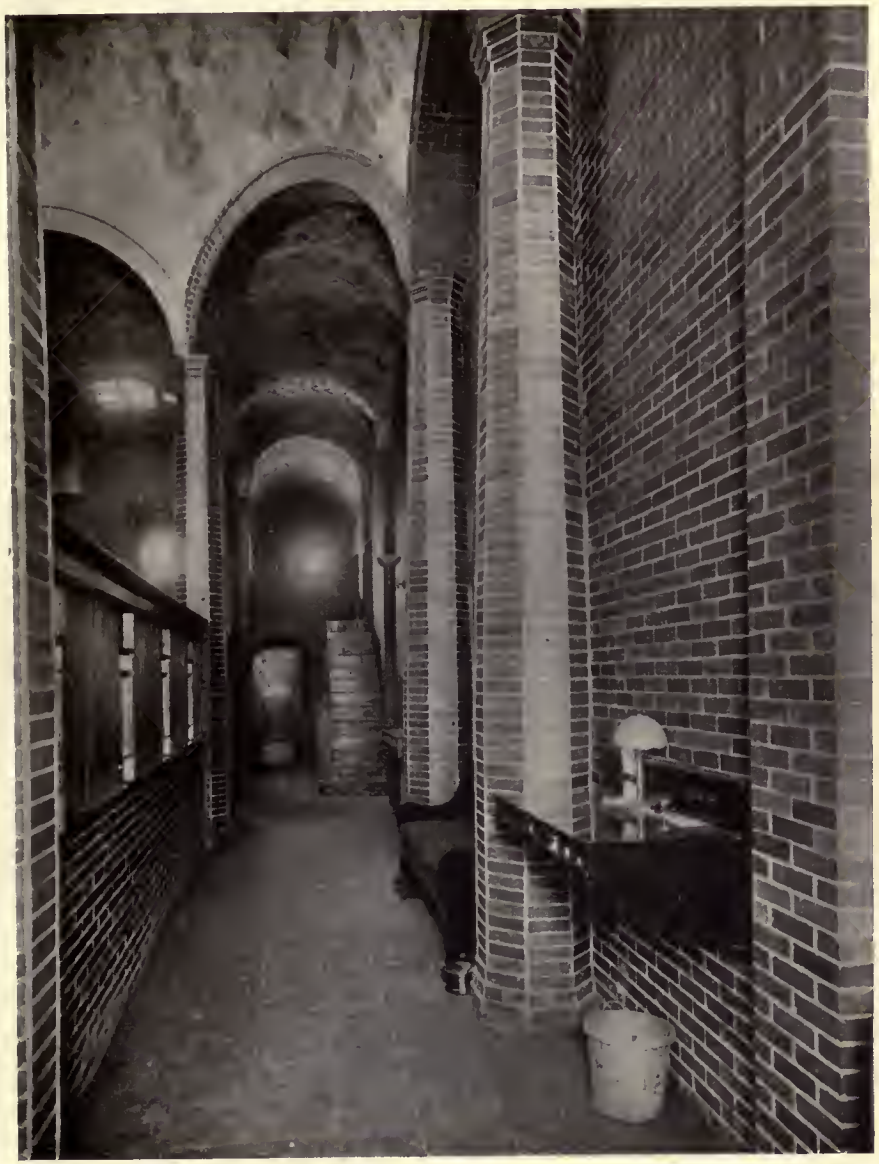
This building is 25′ wide by 85′ deep, fireproof, and constructed almost entirely of brick excepting the terra cotta entrance and cornice. All of the interior walls and the bank and other partitions and columns are of old gold brick.

The interior roof is of Guastavino tile construction. The entire cost of the building, including fittings and furnishings, was less than $25,000.

PUTNAM TRUST CO., GREENWICH, CONN.

MR. F. A. WRIGHT, *ARCHITECT*

2497

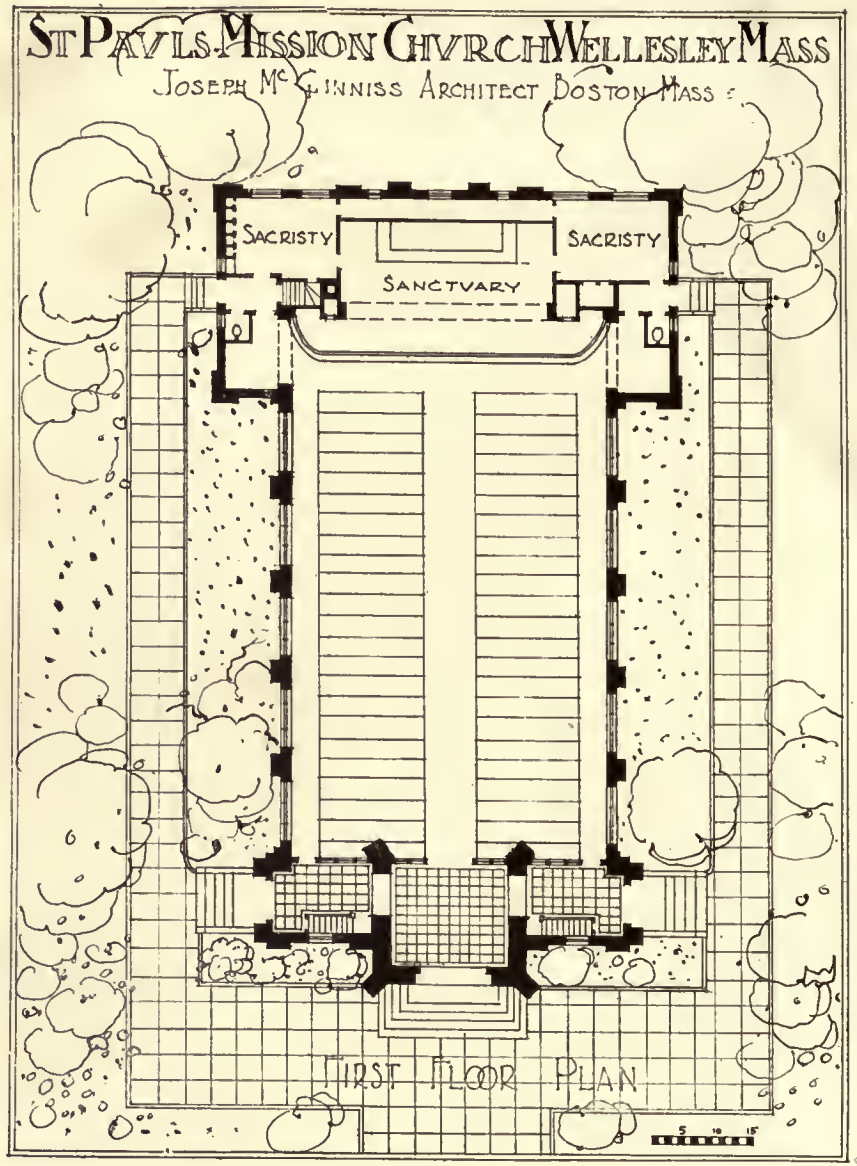


PUTNAM TRUST CO., GREENWICH, CONN.

MR. F. A. WRIGHT, *ARCHITECT*

ST. PAUL'S MISSION CHURCH, WELLESLEY, MASS.

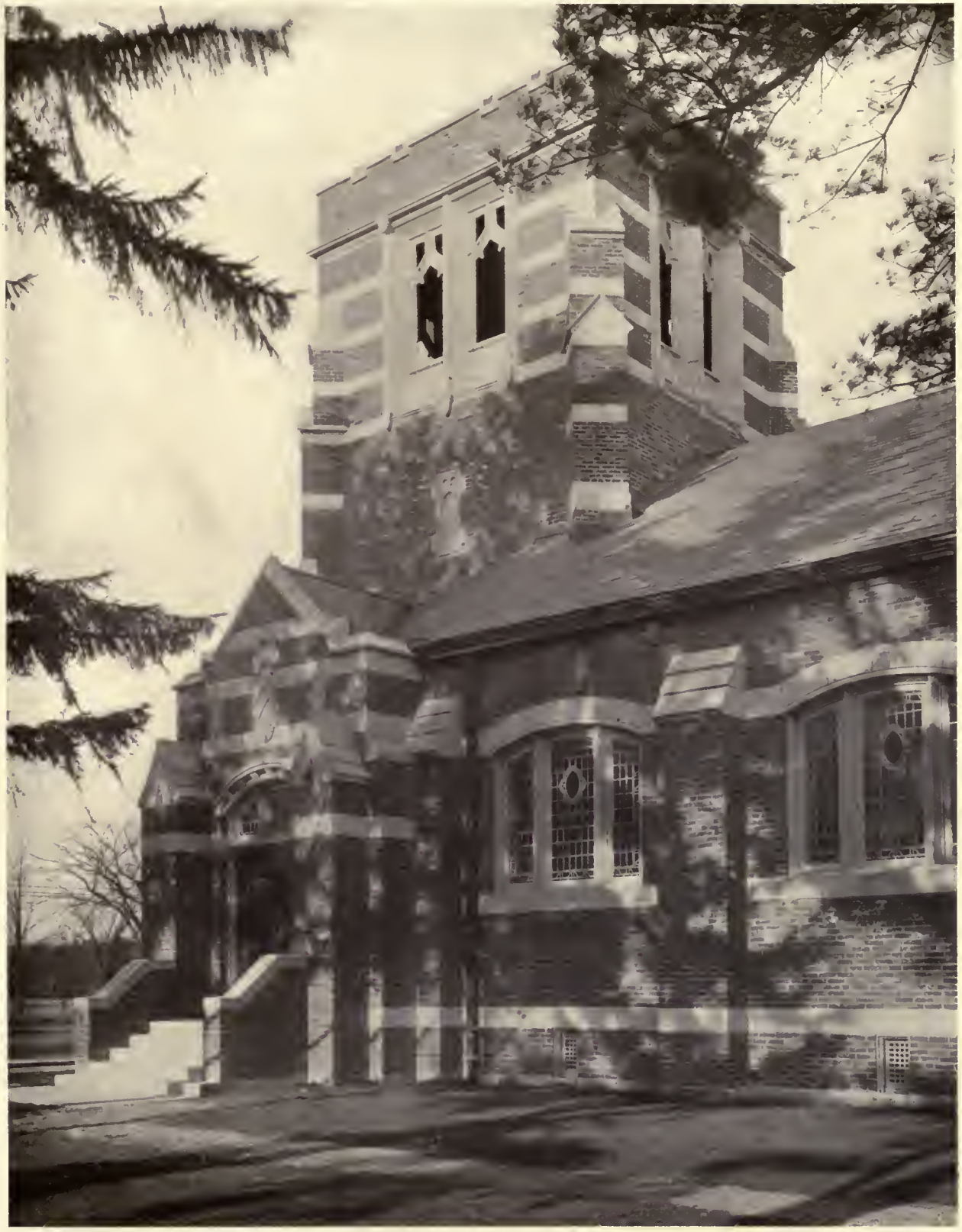
MR. JOSEPH McGINNISS, *ARCHITECT*



ST. PAUL'S MISSION CHURCH, WELLESLEY, MASS.

MR. JOSEPH McGINNISS, *ARCHITECT*

242"



ST. PAUL'S MISSION CHURCH, WELLESLEY, MASS.

MR. JOSEPH McGINNISS, *ARCHITECT*

BEMB FLORAL CO., DETROIT, MICH.

MESSRS. MILDNER & EISEN, *ARCHITECTS*

the main entrance and will thus be suitable for occasional use as a ladies' dressing room at times of mixed assemblages for the witnessing of exhibition games or contests or for dances or entertainments.

To the teams is apportioned the locker room adjacent to the ground level entrance from the athletic field. One end of this room is capable of being divided off for visiting teams, and further made convenient by a separate entrance door.

The general locker room at the east end of this floor is to be provided with regulation lockers for general purposes and also the Kansas City system tote boxes for those who need only the limited amount of athletic clothing required for gymnastic work.

At the center of the floor, in direct communication with the locker rooms, is the supervision and supply room where towels and other supplies can be obtained with the fewest possible steps, and from which the entire floor can be overlooked.

To give the maximum ventilation most of the partitions in this story are of wire grille work from a point six feet high to the ceiling. Artificial ventilation is also obtained in all the locker rooms, toilet and shower rooms by a system of exhaust ducts operated by a fan discharging above the roof.

The main entrance lobby is two stories in height and, with its barrel vaulted ceiling and walls lined with cases for display of cups, prizes and trophies, provides an interesting entrance to the visitor.

Perhaps one of the most interesting as well as most popular features of the building is the swimming pool. A well-planned pool should have good daylight and natural ventilation, and in this case the slope of the ground provided an opportunity to build a swimming pool at the south front of the building, the roof of which would form a terrace or little plaza. Direct sunlight falls into the water of the pool and gives not only a sun-flooded room, but insures the best sanitary conditions.

The pool is standard length for swimming events—sixty feet,—lined with mosaic tile, and with the usual spring-board, flying rings, and varying water depths to provide for deep diving and also for non-swimmers.

By actual tests it has been found that the average man in diving from a spring-board reaches the greatest depth of his dive at a point eight feet from the end of the board, the contour of the pool bottom has, therefore, been made to provide the deepest water at this point. This contour has also been varied a little from the usual at the shallow end, as recent statistics show that in colleges 60 per cent of the users of the pool are non-swimmers, and fully one-half of the pool area, therefore, ought to be suitable to their use, particularly since this can be provided without interfering with the convenience of swimmers.

The top of the pool life rail forms the top rim of a tile gutter which constantly carries away the surface water with any impurities or dust collecting on it. Tile numerals along the edge give the depth of the water above the sloping bottom and other similar numerals, the number of yards from the pool end. Dark tile lines along the bottom divide the pool longitudinally into swimming lanes.

One of the most important yet often neglected provisions is for an avoidance of a crossing of the trails of wet and dry feet going to the locker rooms and from the locker rooms to the pool and back. This is adequately taken care of by special stairways leading direct from each locker room through the shower room to the pool, thus, by the way, making neglect of the necessary shower bath difficult.

A separate visitors' stairway is also part of the plan.

For the washing and sterilizing of garments, a laundry is placed in the basement which is reached direct from the locker rooms by a dumb waiter.

The pool water is thoroughly sterilized by being passed through a hypochlorite of calcium chamber and then through a series of filters.

DETAIL OF ONE OF THE CARVED PANELS

THE MARY BAKER EDDY MEMORIAL CAMBRIDGE, MASS.

By EGERTON SWARTWOUT, *Architect**

THE design of the memorial for Mary Baker Eddy was a gradual development from the original scheme, and was influenced by the character of the memorial, by the site, and by the material finally adopted.

The memorial can be seen from all sides equally well, close at hand from the cemetery road, and from a quarter of a mile away across the lake. Indeed, it is this body of water which forms the chief beauty of the site. There is a drop of approximately ten feet from the level of the road to the level of the lake, there being a natural terrace on the axis of the plot which lends itself admirably to the architectural development of the memorial. This change of grade in the memorial is accomplished by a double flight of circular steps leading from the platform in front of the memorial to a similar platform some five feet below it on the lake side, and these circular steps, as seen from across the water, seem to embrace the memorial and give it a substantial foundation, and by their curved lines complement the curve of the colonnade above.

The original scheme was essentially a marble design, as it seemed that in no other material could the requisite fineness of detail be obtained, but after much investigation it was decided to abandon marble, and Bethel white granite was finally selected.

Mr. Menconi, the modeler and carver, then made a series of experiments with the granite to determine just to what extent the carving could be carried. We found that with the aid of modern methods this hard granite could be carved with the delicacy of marble, and that marvelous results could be obtained.

I think it can be said without fear of contradiction that, leaving aside entirely any artistic excellence, such perfection and delicacy have never been attained before in this unyielding and enduring material. There is certainly nothing in modern times that can approach it nor, as far as I know, in any of the monuments of antiquity.

The detail is novel; it is not a copy of any highly conventionalized type, but is living and vibrant and at the same time it still retains its classic feeling.

The panels in the pylons are a little over one foot high and about three feet long, and are in high relief.

The memorial itself consists of a circular colonnade of eight columns, 15 feet in height, surmounted by a cornice and a cheneau course or cresting. There is no roof or covering; the colonnade is open, and similarly there is no pavement in the circle inclosed by the columns, nor is there

(*Continued on page* 248)

*Reprinted in part from an article published by the Memorial Committee.

THE AMERICAN ARCHITECT

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VOL. CXI APRIL 18, 1917 No. 2156

WAR AND THE ARCHITECT

SPECIALIZATION, in its ruthlessly logical advance, is entrenched before the realities of war itself. In the course of the European war to date a lack of specialization—that is, a lack of proper regard for specially developed capabilities on the part of individuals or of professional groups and bodies—has repeatedly appeared as an obstacle to complete success and as a hindrance to thoroughness and effective equipment; and this without mention of the loss of highly trained types of minds in the regular course of attack and advance, minds devoted to trench digging, though equipped by years of schooling, training and practice to a skillful use of pencil, rule and instruments; minds whose capabilities might have been diverted to a score of channels of greater service, with distinct advantage at the moment and with the even greater hope of resources to be available when reconstruction shall have superseded carnage. Those of us who have had access to the *Journal of the Royal Institute of British Architects*, to the gazettes of the various *ateliérs* in Paris, or to the German architectural periodicals that still reached this country in the first months of the war, are aware of the long lists of architects killed in action or permanently disabled, having found death or mutilation as regulars on the firing line. With the example of European countries before us, now that our entry into the struggle has made it a world conflict, it is to be hoped that the architect's ability will be given its proper position in the service of the nation.

Far be it from us to discourage regular military service, and there are many architects who will feel themselves called upon to serve as regulars; nor need it here be repeated that all citizens of military age are subject to the call of arms as provided for in the Constitution of the United States. But it may also be said that service to the home land is of the greatest variety and that fighting is but one type of service, even at the front.

The architect's training has made him professionally useful in a special field in time of peace; why should that special usefulness be forgotten or ignored in time of war? While banks were depicted on his drafting board in 1916, there may be barracks in 1917, and in similar fashion museum buildings will cede place to munitions plants, hotels will be replaced by hospitals. The suggestion is too apparent to need further expatiation here.

Let the architect's training be the nation's resource. Let his specialized type of knowledge, duly organized, be an anchor of reliance. Above all, let us by this very service likewise conserve these trained minds for service after the war.

And we must emphasize the need for organization in such service. Specialized minds individually can render but a modicum of the assistance that they can easily give when once they are welded into a unit. The federal government must be assured that there are in New York or in Chicago or in San Francisco a stated number of architects ready to be used as draftsmen, as topographers, as surveyors, as superintendents of construction of bridges, landings, roads, as designers and builders of war buildings of fifty different kinds. And these but suggest the possible fields that would be fertile ground for the architect's specialized training.

Obviously, when such work must be

done—and conditions demand an always increasing efficiency and effective accomplishment in these directions—shall we be considered unpatriotic if we regard the use of such minds for cannon targets as an economic waste? And again, what of the number of those physically unfit in the ranks of the architects? Shall the service of these capable men be lost to the nation because the ranks of the fighting men are closed to them? And, finally, when the war has run its length and men's minds again are set in the course of peace, what of the work of the architects then? In the labor of reconstruction, rebuilding the sinews of the land, the architect bears a great responsibility and, even though destruction by invasion is the least of our fears, ordinary building will in the very nature of things be retarded during the war, so that the aftermath will make heavy demands upon the profession, and at a time when the greatest judgment will be required. Above all, then, let us remember that, though as a nation we may fight for ideals, the conservation of these ideals must be our chief recompense. Such conservation can and should begin at once, and that by an organization of all specially trained minds into available units, classified according to type and length of experience and according to particular field or parts of a given field in which they are best able to be of direct service to the country.

Even as we indite these lines there is brought to our desk a circular and questionnaire sent to its members by the American Institute of Architects. In view of the importance of promulgating such information, we reprint the whole of this circular elsewhere in this issue. Specially important is the itemized list of branches of service in which training and specific qualifications can prove of assistance at once, under the Quartermaster's Corps and the Corps of Engineers in the Army. No doubt the Navy can avail itself, although only to a certain extent, of like services. It is our honest hope that success may come to the Institute's plan, that organization will result and the nation profit thereby. By using the local influence of its chapters and thus bringing individuals more nearly within reach, such organization may be made very closely effective and immediately available service units established.

Assuming, however, that the Institute's circular was sent to members only, we are prompted to ask how those not members shall be organized, especially the great number of younger draftsmen. One way, of course, immediately suggests itself—namely, a census within each office and a report to a local chapter of the Institute, whether the chief of the firm is a member or not. We venture to feel assured that the various chapters would be content to undertake such clerical work as might be attached to the gathering of these office reports, and, after due classification, of sending them to the Institute's headquarters in Washington.

It may be well to point out that the established architect can render still another kind of service. Several of the larger firms have offered their entire facilities—office space, drafting rooms and equipment—to the War Department to be used at any time and in any manner that may be deemed necessary. What a wealth of resource there is again in this type of contribution toward national defense. All honor to those who have blazed the way in this direction, for they have offered gladly a type of sacrifice that nations are usually driven to exact under military law.

Even the schools have fallen into line. Columbia has set the pace by offering its spacious and well-equipped drafting rooms to the Government for military purposes. No doubt other schools will soon follow. The universities generally throughout the land have promptly put the facilities of their various departments at the nation's command.

And, finally, let all architects bear in mind that success can come to our arms only if they are adequately supported; that service is manifold; that the specialized training of the architect is an asset to the land in war as well as in peace, and that, with proper organization, professional services rendered will redound to the profit and glory of the United States.

RICHARD F. BACH.

THE MARY BAKER EDDY MEMORIAL, CAMBRIDGE, MASS.

MR. EGERTON SWARTWOUT, *ARCHITECT*

THE MARY BAKER EDDY MEMORIAL

(*Continued from page* 244)

any stone structure of any kind over the grave itself, but the space between the columns will be filled entirely with growing flowers. This colonnade rests upon a stylobate of three steps, which stylobate is surrounded on the road side by a broad platform of pink granite, which contrasts admirably with the white granite of the memorial itself.

The entablature is extremely simple, relying for its ornamentation on the exterior, chiefly upon the carved cresting and the bronze inscription in the frieze, and on the interior upon the elaborate and effective frieze, which is carved in high relief.

While this landscape treatment has not been definitely decided upon, it will probably consist chiefly of some evergreen plants that will preserve their form and leaves through the entire year, cedars and rhododendrons, and similar plants.

TEXT OF CIRCULAR SENT OUT BY THE INSTITUTE

THE AMERICAN INSTITUTE OF ARCHITECTS
CENTRAL COMMITTEE ON PREPAREDNESS

THE history of the past two years has proved that the greatest need of any country in time of trouble is organization. We, as a nation, need to know what our resources are in men, and to have our knowledge in such shape that we can utilize our latent force.

The architectural profession has certain knowledge that should render its members peculiarly valuable to the country in time of trouble.

The American Institute of Architects, having, through its president, offered the services of the architects of this country to the President of the United States, is about to classify the knowledge and special abilities of its members and other architects, in a manner that will render it able in the shortest possible time to place these men where they can render their best service with no lost motion.

Every citizen of military age is of course, under the Constitution of the United States, subject to the call of arms. Most architects, owing to their professional training, can be of greater service than the usual enlisted man.

Anyone feeling himself disqualified for service by reason of age, physical disability, or disinclination, should nevertheless sign and return the blank, thereby saving the committee the work and expense of follow-up letters.

We therefore ask all architects to fill in the attached blank and return it at once.

As the Institute has no funds available for this work, it is suggested that a small voluntary subscription may be sent to D. Everett Waid, treasurer, 1 Madison Avenue, New York.

Central Committee on Preparedness

EVARTS TRACY, *Chairman*
The Octagon, Washington, D. C.

AYMAR EMBURY, II, *Vice-Chairman*
CHARLES H. HAMMOND — WOODRUFF LEEMING
FRANCIS B. WHEATON — CHARLES BUTLER
FRANK HOLDEN — SHIPLEY THOMAS

NEEDS OF THE ARMY

The United States Army is in greatest need of line officers, and it would be of the greatest service if the younger men of the profession, particularly those who have had military training, would enter this branch.

The branches of the service in which an architect's training and knowledge would render him particularly valuable are the Corps of Engineers and Quartermaster Corps. In both of these there is no age limit.

The Quartermaster Corps is primarily the business organization of the Army. It has charge of the equipment, supplies, commissary, pay, transportation and building.

The duties of the Corps of Engineers comprise reconnoitering and surveying for military purposes, including the laying out of camps; selection of sites and formation of plans and estimates for military defenses; construction and repair of fortifications and their accessories; the installation of electric power plants and

electric power cable connected with seacoast batteries; construction and repair of military roads, railroads and bridges; military demolitions. In time of war within the theater of operations it has charge of the location, design and construction of wharves, piers, landings, storehouses, hospitals, and other structures of general interest, and of the construction, maintenance and repair of roads, ferries, bridges, and incidental structures, and of the construction, maintenance and operation of railroads under military control, including the construction and operation of armored trains.

The buildings erected under the Q. M. C. comprise barracks, warehouses, hospitals, etc., of which many would be needed in time of trouble, and therefore the architect's services are particularly valuable.

The special qualifications for members of an engineer company comprise:

Engineers specializing in Bridges
Construction
Earth
Concrete
Wharves
Piers
Buildings
Electrical
Highway
Mining
Railroad
Sanitary
Topographical
Construction Superintendents
Topographical Surveyors and Sketchers
Draftsmen
Photographers and Blueprint men
Lithographers and Zincographers
Quarrymen
Miners
Carpenters
Bridge Carpenters
Blacksmiths
Plumbers and Pipe-fitters
Electricians
Enginemen, Steam
Engineers, Gas
Firemen
Machinists
Masons
Caulkers
Riggers
Axemen

From the above it is evident that the architect can fit in somewhere in the Corps of Engineers, particularly in construction, topography, draughting, sanitary and electrical work. The architect would be in charge of much the same class of trades as he is in his professional superintendence, although military engineering technique is quite a different matter. In France many architects are engaged in translating photographs from aeroplanes into maps.

FILL OUT AND RETURN TO
EVARTS TRACY, Chairman, Central Committee on Preparedness
A. I. A., The Octagon, Washington, D. C.

Name .....
Street .....
City .....
State .....
American Citizen.....
Education .....
School .....
College .....
Age ..... Height..... Weight.....
Fitness for active service.....
Previous military training, if any.....
Are you at present enrolled in any military organization?.....
.....

Would you be willing to enter the service of the country in time of need in a position where your special knowledge and ability would be of the most use?

In your professional practice have you special knowledge of:

Administration, and purchasing of supplies and materials.....
Superintendence of construction.....

Engineering
Structural .....
Bridge .....
Road .....
Sanitary .....
Electrical .....

Topography
Surveying .....
Hospitals .....
Warehouses .....

Can you make clear and accurate line landscape sketches? .....
Can you drive a motor car? .....
Have you any other knowledge which you consider would be useful in time of war?
.....

Notice of Removal

On May 1 next THE AMERICAN ARCHITECT will remove to its new offices at No. 243 West 39th Street, New York.

Personal

Mr. Cass Gilbert, architect, announces the removal of his offices to No. 244 Madison Avenue, New York.

Exhibition of Architectural Models

There will be a special exhibition of architectural models April 23 to May 3, 1917, from 9 A.M. to 6 P.M. daily except Sunday, at the Country Life Permanent Exposition, Grand Central Terminal, New York City.

INDUSTRIAL INFORMATION

The Browne Window

An attractive brochure on the Browne Window has been issued by Richey, Browne & Donald, Inc., 2101 Flushing Avenue, Maspeth, N. Y. This window is especially recommended for use in hotels. It is constructed on a new principle which is simple and produces noiseless operation. It is somewhat similar to the casement type used extensively in continental hotels. To open the window it is only necessary to give the sash a gentle push out; to close it, pull in.

It is claimed that it will not stick or bind and will not rattle in the wind. It is constructed of solid steel or bronze. There is no metal to metal contact. There are no weights, chains, tracks, pulleys, gearing or operating devices. The result is an elimination of expense for repairs, replacements and adjustments. The glass can be cleaned on the outer and inner sides from the interior in a safe and simple manner. Architecturally the window is particularly pleasing in appearance. It is said to be readily adaptable to any type of building. Fire retardant qualities are obvious from the construction and materials used. It is said that subjected to test under pressure equal to that of wind blowing at the rate of 140 miles an hour the sash proved itself superior in its resistance to the passage of air to any other window so tested. Other tests were for weather resisting qualities and dust proofness. In both of these it is claimed that the window demonstrated the mechanical excellence of its manufacture.

The use of this window, it is stated, results in maximum light and ventilation, and perfect ventilation without draft. Copy of the brochure referred to will be sent to architects upon request.

Clinton Welded Sheathing

The Clinton Wire Cloth Company, Clinton, Mass., has issued a booklet describing welded sheathing which is a combination of Clinton electrically welded wire and tarred felt. It is said to furnish in this form an inexpensive lathing material for stucco and interior plastering; also a reinforcement for short span concrete slabs in roofs or floors carrying comparatively light loads. This material is manufactured by arranging longitudinal and transverse wires on opposite sides of tarred felt and electrically welding them together through very small holes previously punched in the felt at each point where a longitudinal crosses a transverse wire. In this way the tarred felt becomes an integral part of the wire mesh being locked and held between the two groups of wires, but at the same time having no physical connection to any of the wires. The resulting material is a galvanized wire lathing and moisture proof felt combined. As applied to cement roof and floor construction this sheathing is said to eliminate the use of forms as the material may be stapled directly to the joists and merely screeded over with from one inch to one and one-half inches of concrete or cement mortar.

It is claimed that for light loads and short spans welded sheathing provides both forms and galvanized wire reinforcement combined in one material at about half the cost of wood forms in place.

Copies of this booklet may be had upon application.

250

DETAIL, HOUSE OF E. M. FOWLER, ESQ., CHINO, CAL.

MR. MYRON HUNT, *ARCHITECT*

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THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, APRIL 25, 1917 NUMBER 2157

PLANNING FOR DOMESTIC EFFICIENCY

By HERBERT WHEATON CONGDON, A.I.A.

EFFICIENCY in factory design is an old story; but the urgency is due to a desire to accomplish more work in less time. The home is the place for rest and recuperation, and perhaps that is why it has not been considered from the factory viewpoint. Yet efficiency in the home will give more time for rest and relaxation, more comfort, less friction; and women having realized it have been studying methods of domestic economy, evolving such things as fireless-cookers, paper-bag cookery, vacuum cleaning, and the like. Unfortunately only a few pioneers have realized that much of the lost motion and wasted effort in doing housework is due to faulty planning; grouping of rooms and of the furniture or fixtures therein for esthetic ends and not practical, or worse yet, arrangement that is merely haphazard.

The humorist has held out promise of great reward for the inventor of the self-finding keyhole and the non-squeaking staircase for the how-come-you-so gentry of fiction and the humorous papers. Strange to say, inventors who have taken him seriously have failed to reap great wealth after accomplishing the desired end. A very ingenious device was on the market for a little time, by which pressure of a button similar to that of an electric bell, illuminated a tiny lamp on the bell circuit, so placed that its rays were thrown on the keyhole. Why this is no longer on the market I do not know, for a man who is chained to his keys often finds himself in his own light and would welcome a little assistance in finding that refractory keyhole, even when sadly sober.

But the problem is wider than that: domestic efficiency is fundamentally a matter for the architect to pre-arrange. Just as he can only plan an efficient factory by thoroughly understanding the processes used therein, so he can only plan an efficient dwelling if he knows all about the work of the house which our faithful women have striven to accomplish without the knowledge and annoyance of their lords and masters. Things are different now: the man and woman are each interested in the other's pursuits and duties, each striving to help the other by intelligent advice. Co-operation of an intelligent sort is more common between the architect and his client's wife as he himself proves that chafing-dish proficiency may develop into campfire efficiency and even domestic sufficiency!

Last summer a hundred and fifty thousand men in service on the Mexican border learned how to wash flannels; and for the first time in some cases possessed soft, unshrunken, and perfectly clean flannel shirts. They learned to cook, and to wash dishes, and to take care of the garbage and the fire and the thousand-and-one duties of a household; and being busy men they learned to do these things in the most efficient manner. Those men will be willing to co-operate with their architect to make their homes efficient working-places; and more than one architect has had his eyes opened for the need of reforms in his own planning!

The kitchen is the most neglected room in the house, really, although critics of house-plans always begin their inspections there. It is really the heart of the "plant," the place where the bulk of the daily work of the house is performed. Very often the housewife has to take upon herself the duties of cook and scullerymaid, furnace-man and waitress; in a well-planned house this duty is not very

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irksome, but in some houses the tired châtelaine wonders how anyone can ever be hired to do such fatiguing work.

The relationship of the kitchen to the rest of the plan varies according to the problem. In a very large house it should be in a service wing, and connected to its own suite of dining and sitting rooms: a house within a house. In a very small house it will be within the rectangle of the main plan, related very closely to the dining room. Where this is necessary comfort suggests that the room over it be an important bedroom. A sarcastic client once directed that the guest-room be placed directly above the kitchen. When his architect called his attention to the disturbances of those precious hours of morning slumber that were sure to ensue, he replied in the terse words of Poor Richard: "After three days, fish and visitors *stink*." Efficient planning!

Where the kitchen is not in a service wing, it should be so placed that the maid (presumably the only servant) can reach the front door in the fewest steps and without passing through a dining-room. From it, the cellar should be easily reached from the cool depths of which roots, vegetables and preserves will be brought; the back stairs, if the house is large enough for so necessary a luxury, may go up over the cellar stairs. The entrance from outdoors ought to be so planned that the tradesmen may deliver their bundles without tracking all across the floor, and in this connection it is well to provide one of the modern package boxes that are built in the wall, permitting tradesmen to make deliveries without entering the house at all. The door locks automatically when closed, and remains locked until the inner door has been opened, the article removed, and the

PORCH FIREPLACE

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MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*

THE ENCLOSED PORCH
HOUSE OF J. H. LYNN, ESQ., LANGHORNE, PA.
MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*

inner door again closed, when the outer door is again operative. The device is inexpensive, but saves the maid many steps if the grocer happens to come when she is making beds on the third floor, as well as saving that neighborhood gossip a considerable amount of time.

Except in the very small house, it is unwise to use the kitchen as a laundry as well. The necessary smells and steam of wash-day do not belong in the kitchen, and if a laundress is employed she is apt to be in the way of the cook if in the same room, especially if the kitchen is of the modern small but efficient type.

The whole question of the kitchen, its dependencies and equipment, has been well treated by Mrs. Child in her book "The Efficient Kitchen," but as her treatment is from the lay viewpoint and not that of the architect, a few matters should be developed further. In the first place, she makes clear the folly of the "large and airy" kitchen beloved of the Yankee housewife, a true "*salle des pas perdus.*" Lost steps, she points out, mean fatigue without the reward of work accomplished. Again, she points out the essential relationship of the three work-places in the kitchen: the stove where the food is cooked, the kitchen cabinet where much of it is prepared, and the sink where certain foodstuffs are prepared and where the dishes and utensils are washed. A central table, equally accessible to these three articles, is also usually required.

The stove should be the center for the other two as so much of the work is done there. Its location should assure good lighting both by day and night. Often the worker has to stand in her own shadow because the architect, never having worked at a stove, did not think of it in arranging his windows and lighting-

outlets. The stove itself may be either gas or coal or a combination of the two; and it is worth remembering that the electric stove applying the principle of the so-called fireless cooker is now a commercial possibility, especially in those favored localities where electric power is cheap. A certain village in Vermont is said to use electric power for cooking in over half of its dwellings, as it is close to a water-power and the current sells for about 4c a kilowatt. Electric stoves are used in many cooking schools, even at city rates for power, and women who have used them are enthusiastic over them. When one considers the possibilities in the way of automatic control by clocks and thermostats, it is seen that they possess conveniences as far in advance of the gas range as that is in advance of the coal stove.

The kitchen dresser should be more than a mere receptacle for dishes and utensils; now that ready-built "kitchen-cabinets" are made in so many sizes and styles and even in units that may be combined to suit special needs, there is little excuse for the old-style dresser. The kitchen-cabinet is as compact as the arrangements of a dining-car pantry: it contains receptacles for dry groceries arranged so as to be readily accessible, storage spaces for the dishes and utensils required in the preparation of food, and some form of sliding shelf or pastry-board. Unfortunately a number of the cabinets on the market have been filled with foolish novelties meant as selling-features which in no wise add to their usefulness but which certainly detract from their appeal to a serious-minded architect. Bulky articles like flour and sugar should be in receptacles which may be filled and used without the necessity for a heavy lift for the woman worker. The flour receptacle generally has a sifter built into it, and with the sugar container is provided with some sort of valve or gate to control the outgo, as well as a glass gage to show the amount in reserve.

The kitchen cabinet does not altogether replace the dresser; some storage space is required in the kitchen for dishes other than those used in cooking. Indeed, in small houses it is better to have the dining-room dishes kept in the kitchen where they are contiguous to the kitchen sink in which they are washed: a butler's pantry as a dish washing place is not convenient unless several servants are kept. It is easier to wash both dishes and cooking utensils at a common place, and the kitchen sink is the place. Even if dishes are kept in the pantry, it is advisable to make the dresser open both to the dining room and to the pantry. On the dining room side the doors may be of glass in such decorative use as seems fitting; on the pantry side they should be panelled. This makes it possible to set the table from this dresser without leaving the dining room, while the dishes may be replaced after washing from the pantry side. A further development of this is to set the dish-closet or dresser in the wall separating the kitchen and dining-room, the pantry becoming a mere passage. In this way many steps are saved both in setting the table and in replacing the washed dishes in the dresser; and saving steps saves both time and fatigue.

The dresser ought to have drawers in it for the storage of table linen, for table cutlery and for silverware. The latter should be in a drawer subdivided by thin wood and lined with cloth or velvet. This drawer or drawers should be capable of sliding out into the dining room and also into the kitchen, for use as outlined above for the dish-shelves. The silver drawer should be small enough to be easily carried, as it will often be removed from the dresser and taken upstairs for protection overnight or to a safe-deposit vault for the summer. Dividing it makes the setting of the table much easier, as each species of fork or spoon is kept separate. There is no advantage in having the linen drawers slide into both the dining room and kitchen, and indeed, many persons prefer to keep table linen on shelves in a cuddy closet beneath the shallow silver and cutlery drawers.

The kitchen sink is probably the least efficient part of the domestic economy. Almost universally it is set too low, is too small, and too shallow. Anyone who will wash dishes in the average kitchen sink will finish with a sharp backache, due to

DETAIL TERRACE FRONT

ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.
MR. CHARLES BARTON KEEN, *ARCHITECT*

(For additional illustrations of this house, see plate section)

the uncomfortable stoop that is made necessary by the low sink. An apron is required to protect the worker from the slop of the swirling dishwater, which could not slop over if the sink was a little deeper; and, finally, many sinks are so small that they will not hold a dish-pan large enough for the number of dishes to be washed. Hence a small pan is used with the need of constant emptying and refilling with clean hot water; or the usual alternative of insufficient washing of the dishes and a consequent greasiness thereof. Drainboards, too, are perversely small or as perversely on the wrong side. The really comfortable sink has two drainboards, one on the right for the unwashed dishes and another on the left for the washed but still soapy ones. Ample room makes stacking these unnecessary, and therefore the chief source of chipped and broken dishes is done away with. Many dishes are also chipped by knocking against the faucets, which as a rule are too low and project too far. The usual sink is also set on legs which interfere with wiping up beneath it. In our own practice we use a sink about 8 in. deep if we can get it (and there is not much choice) and set it on concealed hangers so the bottom of the dishpan will be not less than 2 ft. 9 in. above the floor, having a drainboard at each end of the same width as the sink and at least 2 ft. long. The size of the sink depends on the size of the house, of course, but we find that 21 x 36 in. is a very convenient size. In parish houses, where there are a great many dishes to wash after a big supper, 24 x 48 in. will be a better size, as it permits the use of two dishpans. A convenience which is hardly a part of the plumbing contract is a 3-ft. length of rubber tubing with end arranged to slip over the hot water faucet, with which the washed but soapy dishes may be thoroughly rinsed and scalded, then left to dry of their own heat. With the exception of glassware, this gives a satisfactory result. If this is to be done, the drainboard must be set with a good pitch, and be deeply grooved. For material, we prefer the ash drainboard to enameled iron, as it is less apt to chip dishes.

Good lighting is as necessary for the sink as the stove: and a 6-in. shelf immediately above the splash-back of the sink, and about 4 ft. long, is a much appreciated place for the clock and brushes and cans or boxes of soap-powder or other cleansers.

Before leaving the kitchen a word as to interior finish may be useful. As a selling point, a nice white enameled kitchen is fine: but as a thing to live with when servants are scarce it is an abomination. Pine or whitewood, stained and varnished, has the merit of not showing dirt: and the white surface shows dirt so effectively that it needs constant care. Two or three batches of pancakes or other fried dishes will coat it with dust-catching grease in a thin and tenacious film. Of course the neat housewife wants to remove this, and if it is visible enough to annoy her it must be removed, happen what may. But if she is wise and wants to keep house instead of being kept by her house, she will permit her architect to finish the kitchen woodwork in a fairly dark stain and varnish, and to paint the walls a warm buff. "Out of sight, out of mind" and the film of grease and dust will only have to be scrubbed off a couple of times a year. If this be treason, make the most of it.

This same grease-film makes dresser and cuddy doors advisable instead of the open shelving that Mrs. Child advises for her ideal kitchen: the glazed doors will catch it, and they are easier washed than stacks of dishes and utensils.

The pantry is an adjunct to the kitchen as well as the dining room. Old New England houses have two such rooms, one being a pantry proper and the other "the butt'ry," a cold room in which the pie-crust is made and where the cooky-jar beloved of boyhood always stands in the corner near the door, on the lower shelf. A pantry, in a large house, is the storage place for the dining-room dishes and silver. In such a case it requires a sink for dish-washing, the kitchen sink being used entirely for rough work. It then becomes the headquarters of the butler, and should be provided with a silver safe and a plate-warmer. In smaller houses

it is an excellent place for the refrigerator: but this should be arranged for outside icing unless the modern electric refrigeration is used.

The kitchen closet has not been mentioned because it is better omitted. At best it is a catch-all for decrepit utensils; at worst it is a breeding place for vermin. Large utensils like kettles and ice-cream freezer are best kept in the cuddy beneath the kitchen-cabinet. The smaller utensils should be hung, French-fashion, on hooks which may be either on the wall or on a frame over the center table, but should be immediately accessible to the stove. This not only saves steps, but by having everything out in plain view insures cleanliness and prevents the accumulation of worthless utensils. Many of the smaller utensils have their places provided for in the kitchen-cabinets, so the "*batterie de cuisine*" will consist mostly of sauce-pans, frying pans and broilers, with the attendant flesh-forks and cooking spoons.

Next in importance as a point of attack are the bathrooms. Presumably there will be several. Presumably, too, most of them have the character of private baths, so that there is little need of putting the water-closet in a separate room from the bath. This was considered a luxury in the days when one bathroom served an entire family.

Probably one of these toilet-rooms at least will have two doors, one opening into the adjoining bedroom, one into the hall or another bedroom. Plan to have these adjacent, and for the lock styles of the doors to adjoin, the doors swinging out from the bathroom. If this is done, a long hook on one door engaging with an eye on the other door will fasten both at the same time, and the occupant of the room cannot leave without unfastening

BED ROOM

HOUSE OF J. H. LYNN, ESQ., LANGHORNE, PA.

MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*

both doors. Those who have forgotten to secure the other door have had their embarrassing experiences, and those who have found themselves locked out of their private bath by a forgetful guest will welcome this simple device. It costs nothing, but it makes for efficiency.

In the case of a toilet being for general use, if possible plan the water-closet near the entrance door, with the door opening toward it. Then if the occupant of the room has forgotten to fasten the door the opening door will swing against his foot, concealing him, avoiding embarrassment and securing the entrance.

The lighting of the mirror in the bathroom may generally be improved if the plan is studied in time. A man who shaves daily will find it a convenience if there are two small windows with sills high enough to conceal him from the breast down, from outside view, and placed with a mullion about a foot wide. On this mullion a mirror should be set, and over the mirror a bracket for electric light. Both sides of his face are then properly illuminated for shaving either day or night, and there is no need of the discomfort that too many persons have to put up with. Convenience suggests that the lavatory also should be placed here, and that the mirror should be set in the door of a wall-cabinet, so that the operation may be undertaken without the expenditure of a single step.

Little can be said in regard to the plumbing fixtures, unless a warning is given against solid porcelain bathtubs, which are a luxury for the wealthy indeed; if a person wants a really hot bath the tub has to be filled and emptied two or three times before the massive earthenware gets heated through and ceases to absorb the heat of the water, chilling it to a degree well below that desired.

The location of furniture is seldom thought of in planning a dwelling, and it ought to be one of the controlling factors, at least in fenestration. I remember a very handsome dwelling that the proud owner was showing me over while the plasterers were at work; bathrooms and closets and all sorts of comforts had been studied out by his wife and their architect, but he was greatly chagrined when I pointed out to him that there was not a single bedroom in the house where a double bed could be used, so numerous were the closet doors and the windows. It was another example of inefficient planning.

Where sleeping porches are used they should be planned to avoid the storm winds and the early morning sun, and should be provided with some means of protection against driving storms or snow. The floor should be well drained, but there should not be any saddle or step between it and the inside floor, as that would make the moving of beds and chairs difficult.

Last of all is the linen closet, or linen room, as it ought to be. As a rule it is the last thing considered, and is tucked in some space that is sliced from a closet, generally in a dark corner of the hall. Household linen is of two sorts, table linen and bedroom linen. The former should be kept in the pantry, if it is abundant, or in a drawer or cuddy of the dining-room closet in a small house, close to its origin, the laundry, and to its end, the dining-room table. Bedroom linen should be kept on the second floor, readily accessible to bedrooms and baths. It is bulkier and more abundant than table linen, and should be kept in a properly lighted room which is large enough to keep each species distinct —guest towels in one neat pile, bath towels in another, and so on. Shelves are better for drawers for linen, but for storing blankets nothing can be better than a drawer made of red cedar and fitted with an interior cover of the same material, which lifts out. These drawers should be beneath a wide counter shelf where the linen is placed as it is removed from the laundry basket and where it is sorted. If a sewing room is provided (and every man will vote for one), the linen may well be stored in a dresser along one wall. Glazed doors, while good looking, are more of a care than paneled wooden ones.

Every woman thinks she knows all about bedroom closets, going on the idea that size is all that is required. The large closet is most always inefficient, wasting precious space. The ideal closet is wide and shallow in proportion, but should never be less than 24 in. deep in the clear.

It should be provided with *two* doors, so that when they are open the whole interior is exposed to view, permitting ease of access to any garment, good light and easy cleaning of the floor and shelves. Shoe-racks on the bottom rails of the doors keep these articles of dress accessible and permit easy sweeping of the floor, which should be on a level with that of the bedroom and without door saddle for the same reason. If the doors are centered on the width of the closet, there will be shelf-room at each side, preferably not much over a foot in depth, for hatboxes and the like. These shelves should be about a foot apart for the greatest usefulness. One shelf, the top one, should go the whole width of the closet and practically the whole depth as well, so as to permit a brace from the rear of the top casing of the door. It ought to be about 5 ft. 6 in. above the floor, and instead of having hooks for hanging the garments should be provided with extension clothing hangers such as are used in clothing shops. The cost is very little and the convenience is very great. Garments are hung most compactly, and by the extension feature may be readily inspected and gotten at. A similar arrangement in the cedar closet more than doubles its capacity.

DINING ROOM
HOUSE OF J. H. LYNN, ESQ., LANGHORNE, PA.
MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*
(For additional illustrations of this house, see plate section)

There is no secret about efficient planning—it merely means an analysis of a problem that few persons have thought about. If these few pointers have led anyone along new paths of thought, they will have been worth while. But sometimes we think more about world problems when we should drop our eyes to the more humble problem that is always with us, homemaking.

LIGHTING THE COUNTRY HOUSE

THE question of providing modern lighting facilities is one which in the past has been more or less of a stumbling block in the path of every architect who undertook to design a country home, country club, inn, summer hotel, and, in fact, any kind of a building which was to be located beyond the range of the public lighting service. This is due, of course, to the fact that the extended use of electricity in the city has brought city people to view it almost in the nature of a necessity rather than a luxury and the city people who undertake to build in the country, especially if the building in question is to be a country home, are therefore reluctant to accept any system of lighting that does not provide electric lights.

The generating of electric current is a comparatively simple matter, but it has proved anything but a simple problem to develop isolated lighting plants of a size suitable for installation in country homes or clubhouses which could be manufactured and sold for reasonable prices and which could be counted on to give dependable service at a reasonable cost and without expert attention. In the case of country clubhouses, summer resort hotels and large buildings of that general class, original and operating costs are not always of prime importance and it is sometimes

(*Continued on page* 263)

HALL

ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.
MR. CHARLES BARTON KEEN, *ARCHITECT*

(*For additional illustrations of this house, see plate section*)

MAIN ENTRANCE DETAIL

HOUSE OF E. M. FOWLER, ESQ., CHINO, CAL.

MR MYRON HUNT, *ARCHITECT*

2602

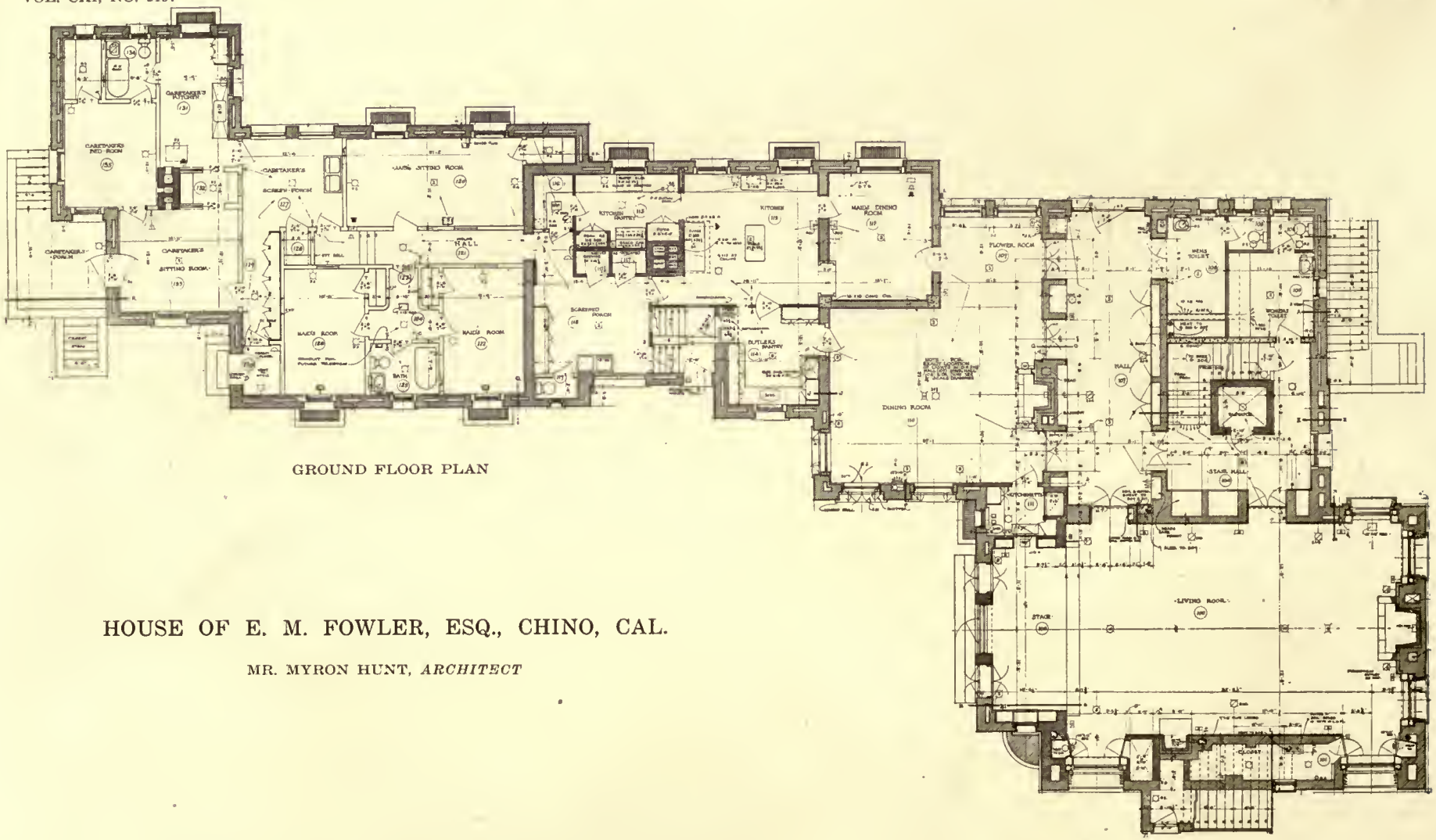
GARAGE

HOUSE OF E. M. FOWLER, ESQ.,
CHINO, CAL.

□ □

MR. MYRON HUNT,
ARCHITECT

260³



GROUND FLOOR PLAN

HOUSE OF E. M. FOWLER, ESQ., CHINO, CAL.

MR. MYRON HUNT, *ARCHITECT*

960

EXTERIOR DETAILS

HOUSE OF E. M. FOWLER, ESQ., CHINO, CAL.

MR. MYRON HUNT, *ARCHITECT*

2605

LIVING ROOM

LIVING ROOM

HALL

LIVING ROOM

HOUSE OF E. M. FOWLER, ESQ., CHINO, CAL.

MR. MYRON HUNT, *ARCHITECT*

TERRACE FRONT

ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.

MR. CHARLES BARTON KEEN, *ARCHITECT*

(For additional illustrations of this house, see text pages)

260-1

LIVING ROOM PORCH

ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.

MR. CHARLES BARTON KEEN, *ARCHITECT*

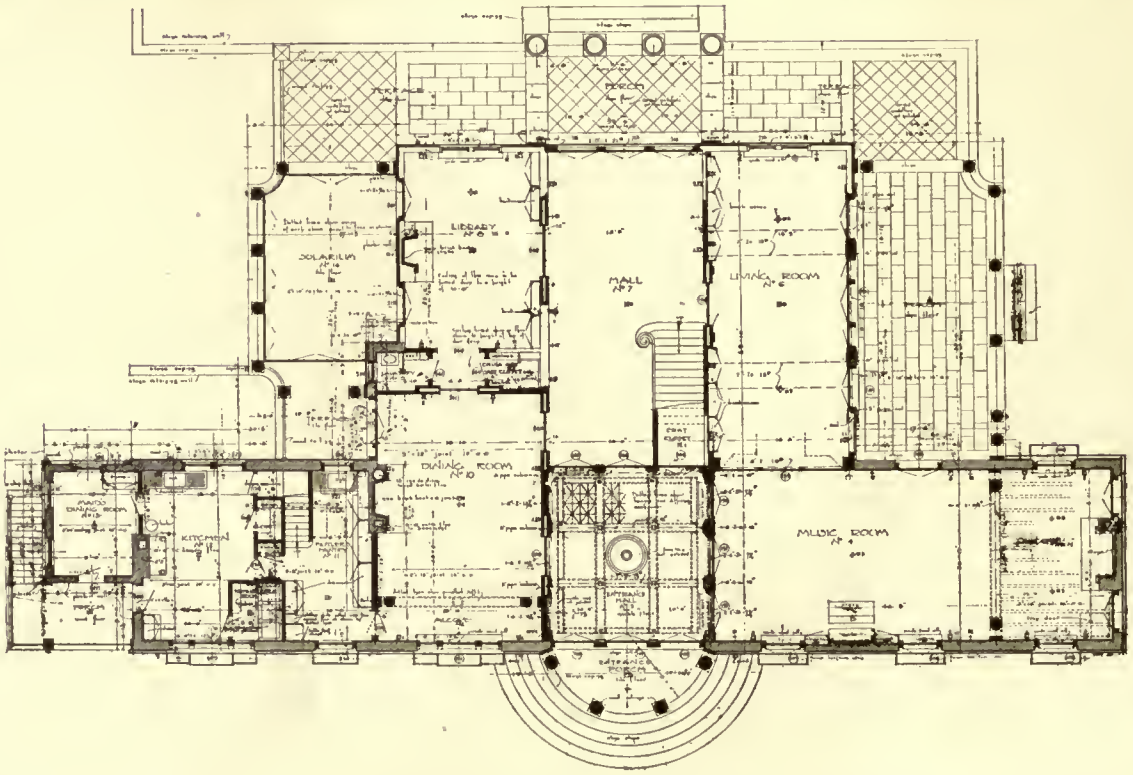
260

DETAIL ENTRANCE FRONT

ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.

MR. CHARLES BARTON KEEN, *ARCHITECT*

SOLARIUM

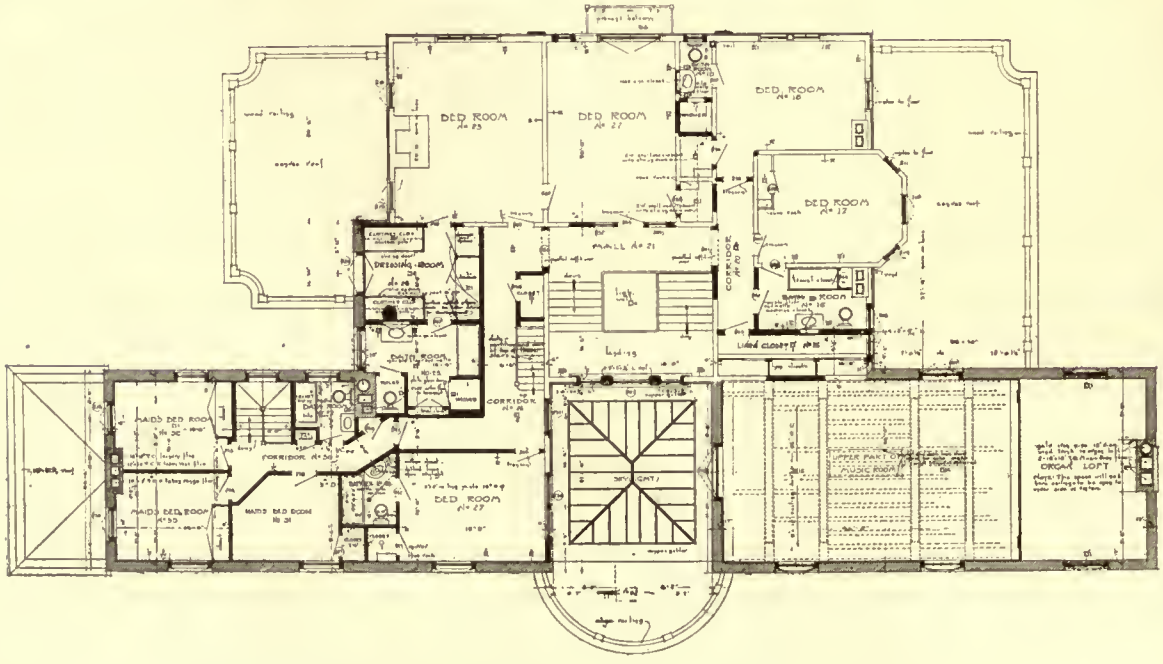


ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.

MR. CHARLES BARTON KEEN, *ARCHITECT*

2601°

VIEW FROM TERRACE FRONT



ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.

MR. CHARLES BARTON KEEN, *ARCHITECT*

ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.

MR. CHARLES BARTON KEEN, *ARCHITECT*

96012

MUSIC ROOM

ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.

MR. CHARLES BARTON KEEN, *ARCHITECT*

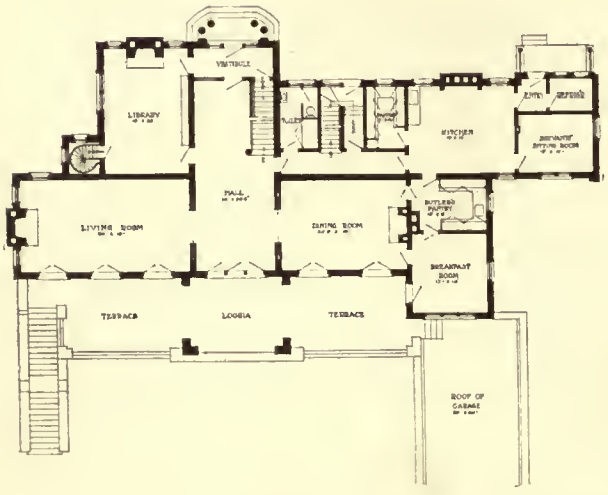
260

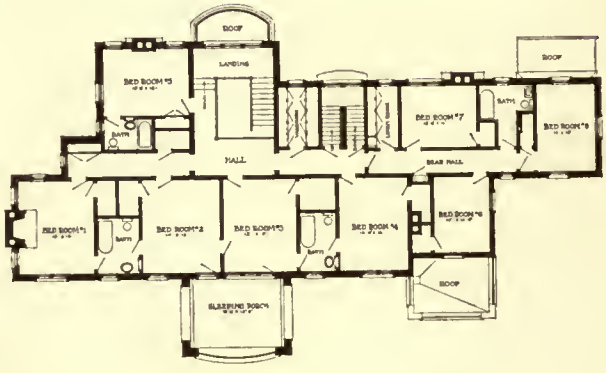
HOUSE OF AUSTIN CHURCH, ESQ., TRENTON, MICH.

MESSRS. DONALDSON & MEIER, *ARCHITECTS*

26014

GARDEN FRONT





HOUSE OF AUSTIN CHURCH, ESQ., TRENTON, MICH.

MESSRS. DONALDSON & MEIER, *ARCHITECTS*

260 15

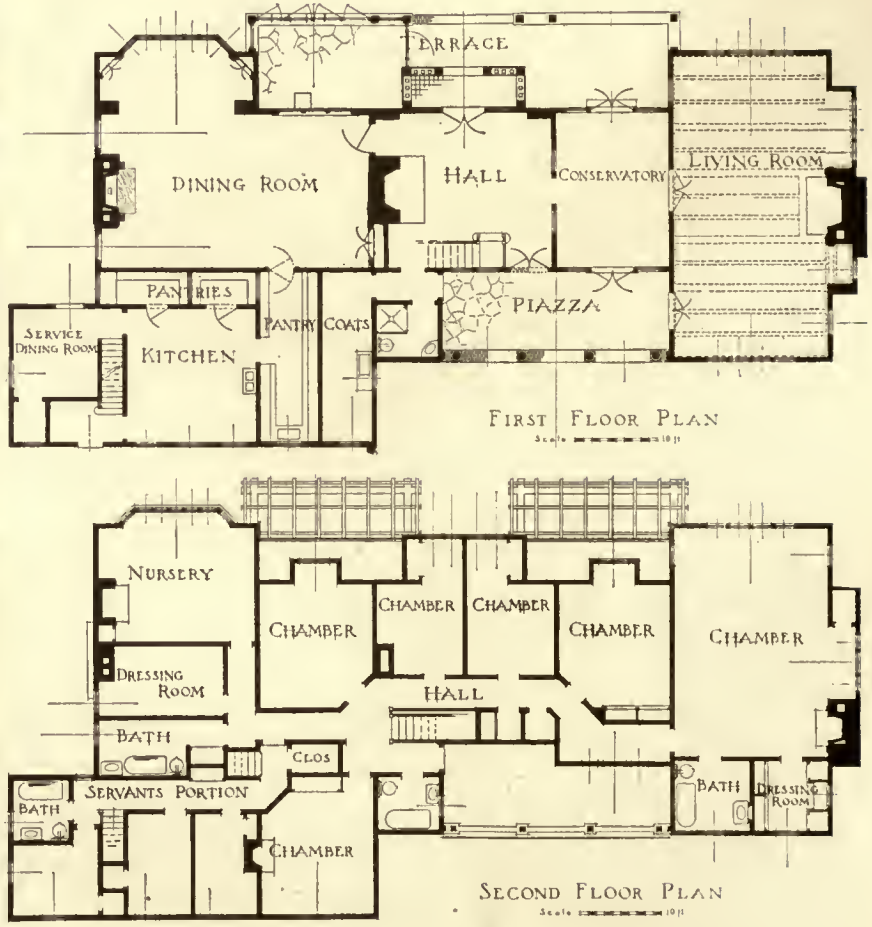
HOUSE OF CLARENCE V. BURRAGE, ESQ., WALPOLE, MASS.

MESSRS. KILHAM & HOPKINS, *ARCHITECTS*

(For additional illustrations of this house, see text pages)

2601⁶

ALCOVE IN DINING ROOM



HOUSE OF CLARENCE V. BURRAGE, ESQ., WALPOLE, MASS.

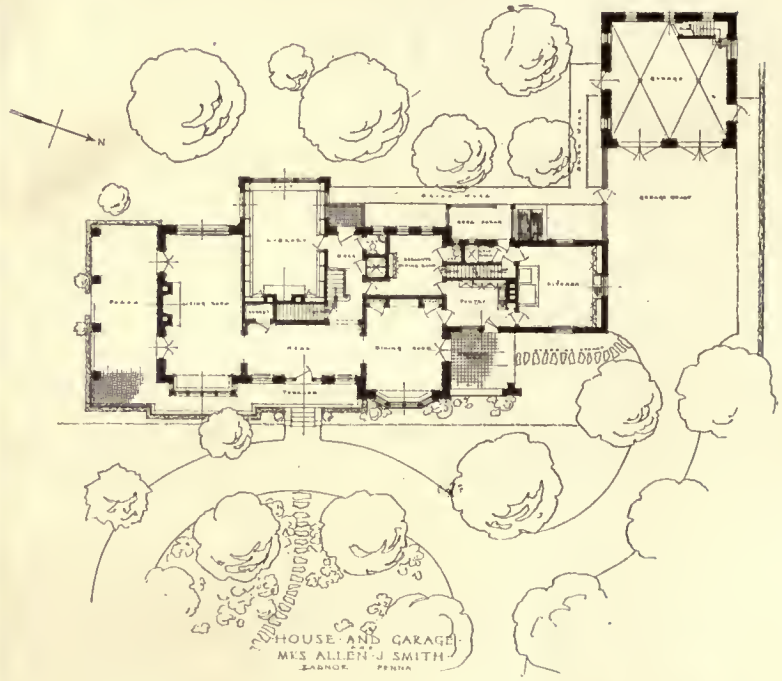
□ □

MESSRS. KILHAM & HOPKINS,
ARCHITECTS

HOUSE OF MRS. ALLEN J. SMITH, RADNOR, PA.

MESSRS. WALTER T. KARCHER & LIVINGSTON SMITH, *ARCHITECTS*

Tan stucco on hollow tile, white wood, bright green shutters, dark green split shingle roof.



HOUSE OF MRS. ALLEN J. SMITH, RADNOR, PA.

MESSRS. WALTER T. KARCHER & LIVINGSTON SMITH,
ARCHITECTS

THE LIBRARY

SIDE OF LIVING ROOM

DINING ROOM

Wood panelling to 6 feet high, silver fixtures. Rug silver grey, hangings blue. Wall above panelling, ivory.

ENTRANCE HALL

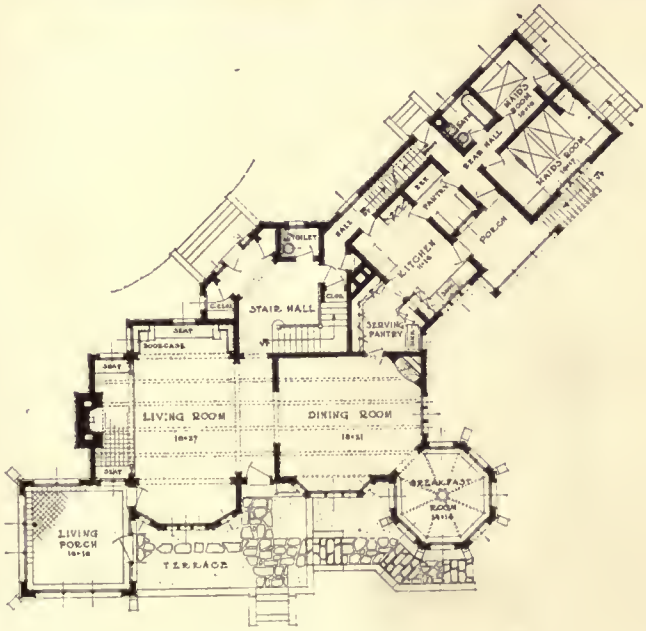
Wood base, trim and chair mold. Wood panel molds on linen covered walls. Plaster cornice. General color of hangings and rug, deep claret.

HOUSE OF MRS. ALLEN J. SMITH, RADNOR, PA.

MESSRS. WALTER T. KARCHER & LIVINGSTON SMITH, *ARCHITECTS*

28019

A HOUSE AT LAKE MINNETONKA, MASS.



FIRST FLOOR PLAN

SECOND FLOOR PLAN

A HOUSE AT LAKE MINNETONKA, MINN.

MESSRS. HEWITT & BROWN, *ARCHITECTS*

HOUSE FOR B. E. DAVID, ESQ., FLORIVAL FARMS, WESTCHESTER CO., N. Y.

MR. ROBERT D. KOHN, *ARCHITECT*

96022

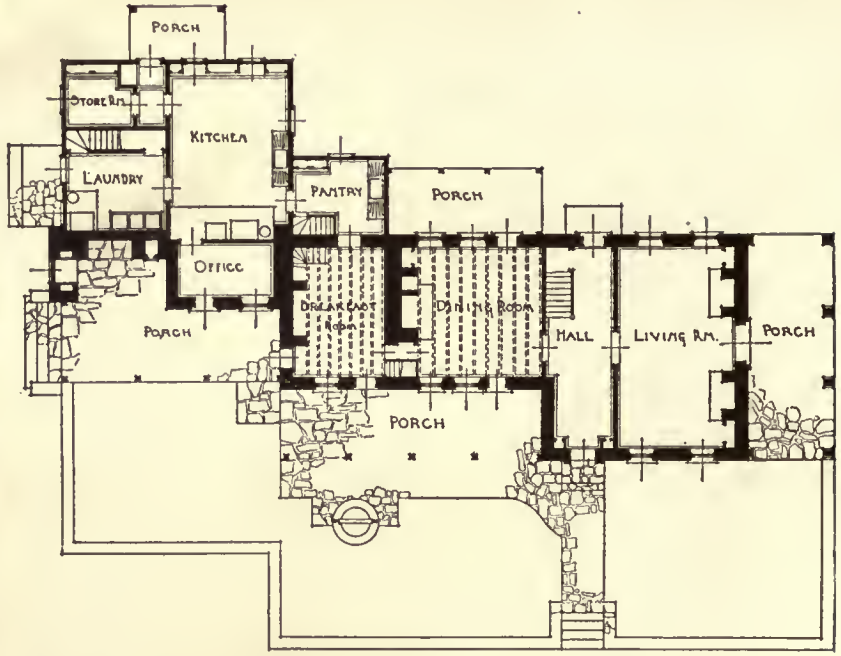
HOUSE OF B. E. DAVID, ESQ., FLORIVAL FARMS, WESTCHESTER CO., N. Y.

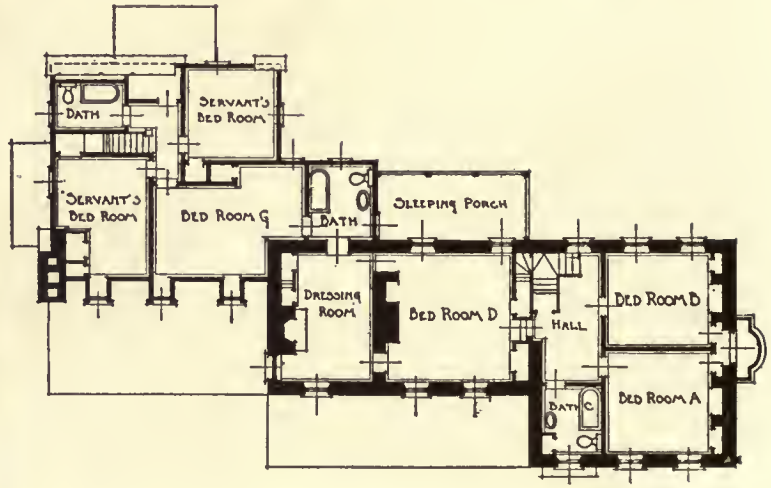
MR. ROBERT D. KOHN, *ARCHITECT*

HOUSE OF J. H. LYNN, ESQ., LANGHORNE, PA.

HOUSE OF J. H. LYNN, ESQ., LANGHORNE, PA.

MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*





HOUSE OF J. H. LYNN, ESQ., LANGHORNE, PA.

MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*

THE DINING ROOM PORCH

HOUSE OF J. H. LYNN, ESQ., LANGHORNE, PA.

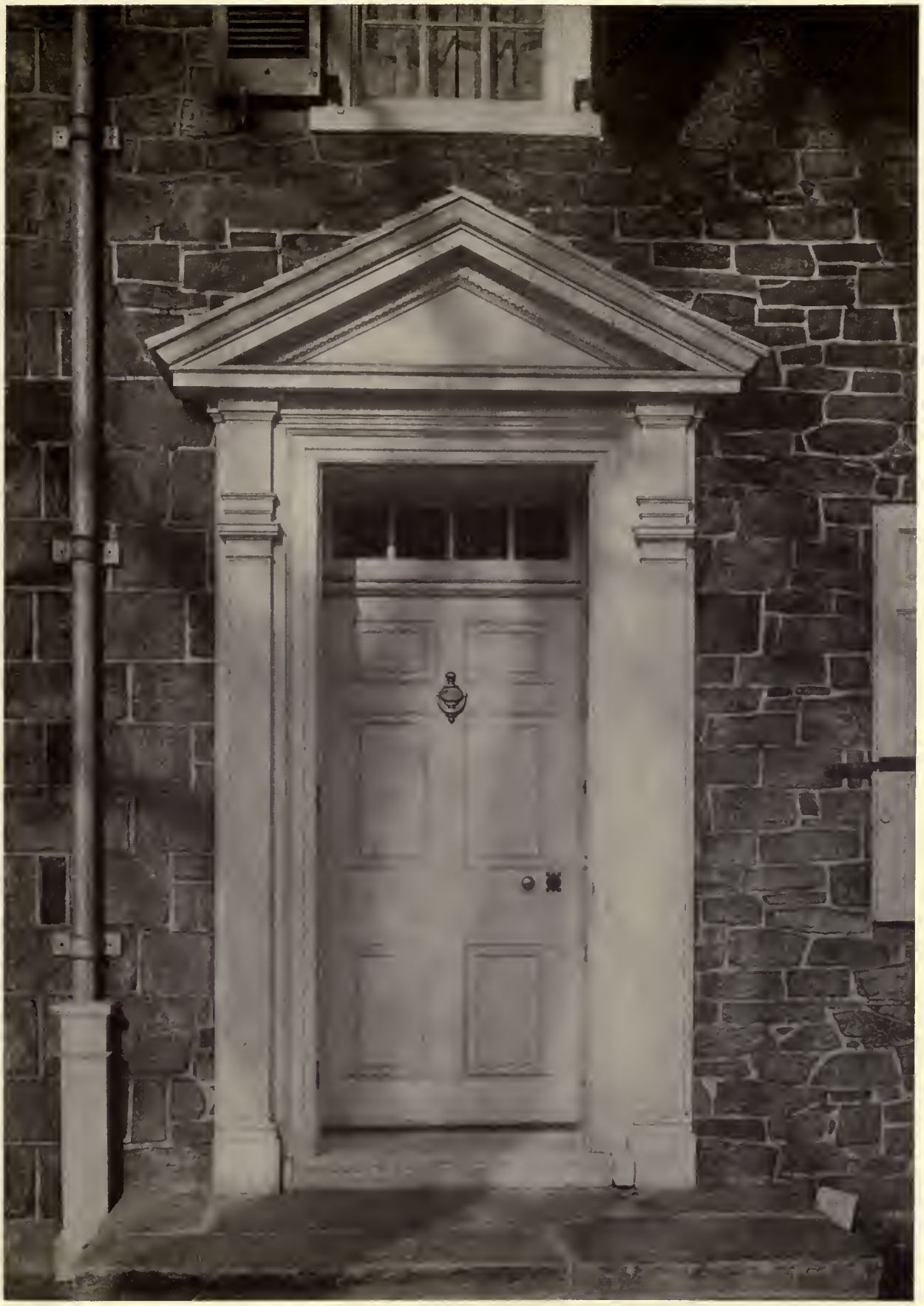
MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*

SLEEPING PORCH—REAR ELEVATION

THE "HIGH COLUMN" PORCH

HOUSE OF J. H. LYNN, ESQ., LANGHORNE, PA.

MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*



DETAIL OF MAIN ENTRANCE

HOUSE OF J. H. LYNN, ESQ., LANGHORNE, PA.

MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*

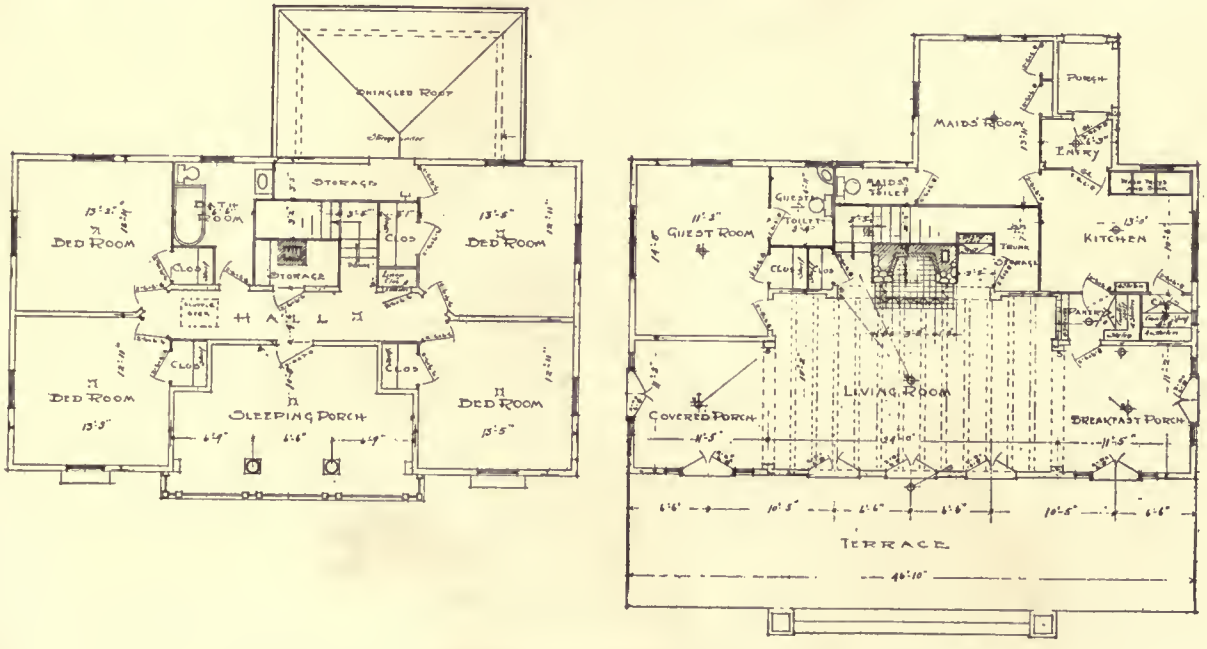
HOUSE OF MRS. W. H. BURR, DUXBURY, MASS.

MR. HAROLD FIELD KELLOGG, *ARCHITECT*

26030

2603¹

LIVING ROOM



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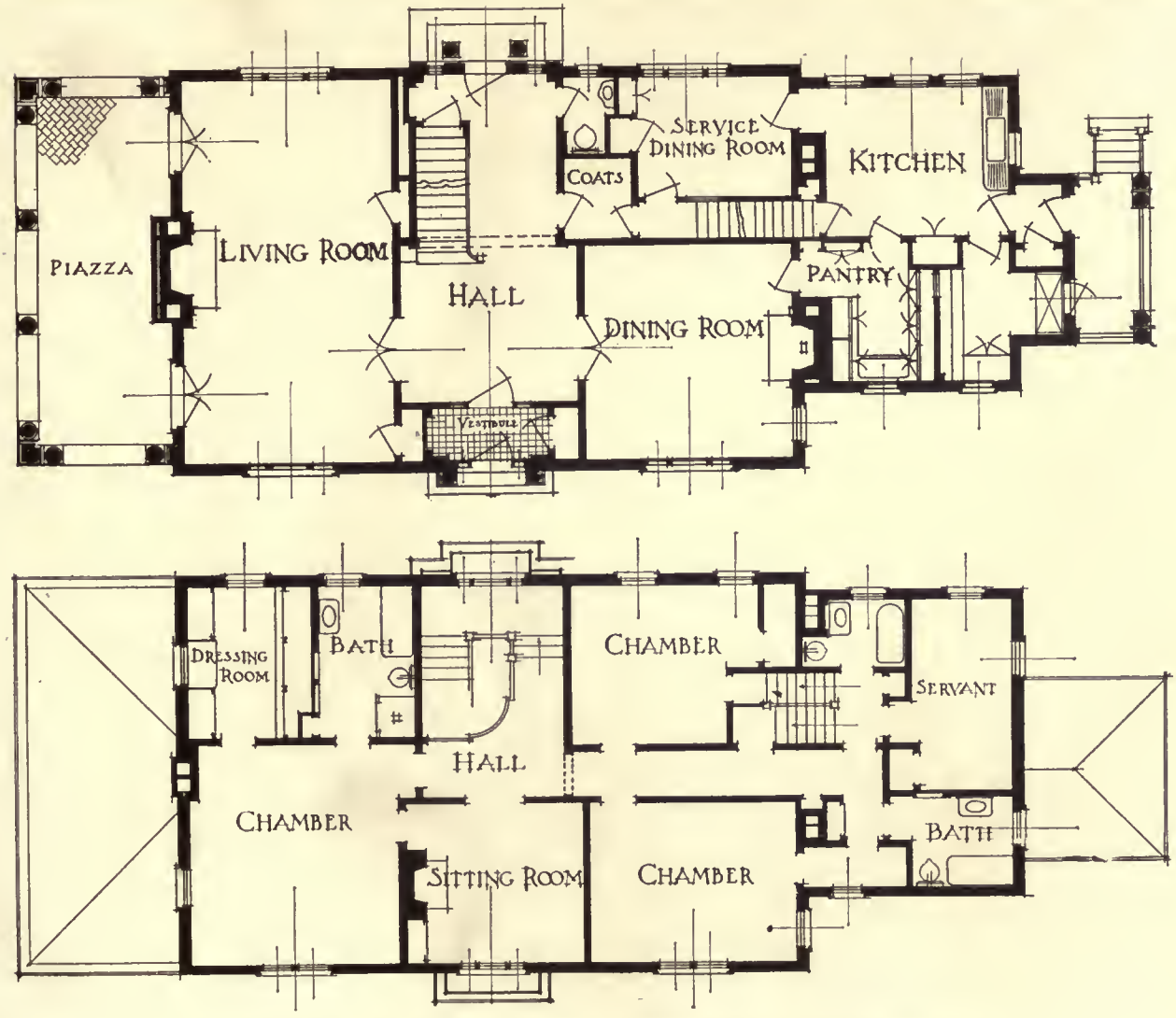
26032



HOUSE OF W. H. MARLAND, ESQ., BROOKLINE, MASS.

MESSRS. KILHAM & HOPKINS, *ARCHITECTS*

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VOL. CXI APRIL 25, 1917 NO. 2157

COUNTRY AND SUBURBAN HOUSES

IT is probably due to the home loving instincts of the race that a larger proportion of our population is interested in home building than in any other form of architectural expression. Further than that, since the urban dwelling no longer represents the detached unit complete in itself with verandas, gardens and grounds, interest now seems to center in the country and suburban house. It is in the development of this type of home that the architect usually plays his most important role—that of educator and uplifter. From the homes of the laboring classes—which are now becoming the concern of many architects of ability—through the various strata to the most costly and highly developed modern house, architecture is contributing an increasingly important part to the education of the masses. That the individual is influenced by his daily environment is beyond question, for while the effect may be so gradual that he is not conscious of it, constant association with artistic surroundings results eventually in appreciation of them. It is a realization of these facts and conditions that makes the work of the country house architect so absorbing an occupation, and possibly accounts in some measure for its excellence. No type of building has improved in its architecture during the past score of years so much as the suburban house of moderate cost. Where a few years ago a large proportion of our suburban and small town houses were without architectural interest, we now find comparatively few that do not give evidence of the architect's work. This is as it should be and encourages us to hope for a time when our villages and countrysides will compare in architectural excellence with those of the countries of the old world. In matters of plan, equipment, and general convenience we have already surpassed anything to be found elsewhere in Christendom.

ASSISTING THE GOVERNMENT

IT would seem that the accusation frequently made during the past two years, by cynics both at home and abroad, viz., that as a nation our patriotism was directly commensurate with our profits—that our attitude toward every world-question was determined by the possibilities for making money which it presented—had been effectively answered since the severing of diplomatic relations with Germany in the early part of February. Producers of copper are now supplying this Government's war needs at something like one-half the market price. Producers and manufacturers of steel are doing likewise. The free use of the largest plants suitable for the manufacture of war supplies and munitions has been offered to the Government. The leaders in every industry, trade and profession have offered the facilities at their disposal for the use of the Government without thought of remuneration. More patriotic action than this—and, after all, actions speak louder than words—can scarcely be imagined.

In line with this general movement to assist the Government in every manner possible, the leading publishers of the country have offered their fullest cooperation. The letter printed elsewhere

in this issue written by the United Publishers Corporation to President Wilson, although one of the first to come to our attention, will undoubtedly be followed by others from not only the technical publishing field, but from publishers of daily papers, general magazines and periodicals. That they can all be of very great help in arousing the interest, enthusiasm and co-operation of their readers, reaching as they do people in every class and condition, there is no reason to doubt.

THE INDUSTRIAL AND BUILDING SITUATION

THAT the entry of the United States into the world-war will produce a tremendous effect on the business of this country everyone concedes. Just what form it will take is not so apparent. It seems safe to assume, however, that the first effect will be to promote a tendency toward thrift in all classes. The savings banks should prosper and high-grade investments become popular. Funds for real estate improvements of sound character should be plentiful for at least a year since our war expenditures for that period can scarcely equal our war profits of the past two years. Under such conditions building should be active and upon a large scale. There is but one adverse factor—the generally prevailing impression that building costs are excessive. That impression undoubtedly grows out of comparison of present costs with those of the lean period before the European war and ignores entirely the shrinkage in the purchasing power of money that has taken place since 1914. But regardless of our ability to show a client that a dollar will only buy three-fourths as much of any commodity as it would three years ago, and that the cost of building is in practically the same ratio to former costs, he will continue to hesitate unless he can be convinced that no reason exists for expecting materially lower prices within a reasonable time. So the relevancy of an inquiry into the probable future of material and labor costs is apparent. The first important factor, quite obviously, is labor. Wages have increased in every industry and it is certain that they cannot be reduced without an economic upheaval of extraordinary proportions. The tendency toward a shorter working day is generally approved and everyone now realizes that it carries with it a higher labor cost. Transportation costs, potentially at least, have increased along with advances to labor. An advance in freights to meet higher labor costs is inevitable. An acute shortage of labor now exists in the United States, and no relief is in sight. It is inconceivable that Europe will permit any considerable emigration to our shores after the war, as every able-bodied man will be required for reconstruction work at home.

In most of the important industries preparations are under way for America's real entry into world trade when peace comes. Foreign business is now financially possible on a large scale. Our banking and monetary systems are now adjusted to its requirements. The building up of export business will tend to lessen internal competition with its resulting lowering of prices, and will go far toward stabilizing the values of the products of American mills and factories on levels higher if anything than those prevailing to-day.

And so it is possible to enumerate one reason after another in favor of the contention that present prices are low—not high. If owners can be made to see that the really pertinent comparisons of costs are with the future rather than the past, building cannot fail to take on greater activity. Viewed in this light, present prices for building materials actually appear to be bargain prices.

DINING ROOM

ALTERATIONS AND ADDITIONS TO HOUSE OF CHARLES I. CORBY, ESQ., GARRETT PARK, MD.
MR. CHARLES BARTON KEEN, *ARCHITECT*

(For additional illustrations of this house see plate section)

LIGHTING THE COUNTRY HOUSE

(Continued from page 260)

practical to employ expert care for the lighting plant, but in the building of a country home such things are of very great importance. No one is anxious to invest between one and two thousand dollars in a lighting plant for a home of ordinary size, to employ a good mechanic to take care of the plant and then to defray unreasonably high operating expenses.

But the factor which is of the greatest importance, regardless of the nature of the building in question, is that of dependability. The electric lighting plant which fails at frequent, or even at occasional, intervals (and it seems, of course, that they always do fail when the light is needed most) is of little more practical value than no lighting plant at all. Experiences of this kind encountered by the country owners of lighting plants have, of course, been due in many cases to the fact that the lighting plant was not given the proper kind of care, but behind this condition lies the more serious fact that many of the plants used were not properly designed or at least that the design and assembly was not well suited for the service which the lighting plant was expected to render.

It seems, however, that during the past five years some of the best engineering minds in the country have been devoted to the carrying out of extensive and painstaking experimental work with a view to producing dependable and economical isolated lighting plants. Work along these lines has been greatly helped by the experience encountered in building lighting systems for use on railway cars, ships, and particularly on automobiles. Perhaps the most important discovery result-

ing from this experimental work was that real reliability and economy in an isolated lighting plant depended not only upon the use of good material and good design of the parts, but especially upon the relative design of the whole plant, *i.e.*, upon the design of each component part with particular reference to its assembly and operation with every other part of the plant. It was found that it was the absence of this balance of design which has so frequently given the owner of the plant trouble, even where the engines, generators and batteries used were of standard makes and good design.

The isolated lighting plant as now manufactured almost always consists of a gasoline engine (unless the installation is so fortunately situated as to be able to avail of natural water power), an electric generator, a storage battery, and a board on which are placed the necessary switches and indicators. The engine and generator are used for the actual generation of electric current and the battery as a sort of storage tank for electric energy, through the use of which electric light and power may be had at any time, whether the engine and generator are running or not. This general system will be seen to be the same as that used for electric lighting of automobiles.

The best designed lighting plants, as is the case with mechanical devices generally, are distinguished by remarkable simplicity both of design and operation. Direct connection of the engine and generator has eliminated the trouble usually experienced with belt drives in this kind of work. On account of the fact that the engine runs at a constant speed it has been found possible to substitute a simple mix-

DINING ROOM

HOUSE OF CLARENCE V. BURRAGE, ESQ., WALPOLE, MASS.

MESSRS. KILHAM & HOPKINS, *ARCHITECTS*

(For additional illustrations of this house, see plate section)

LIVING ROOM

HOUSE OF CLARENCE V. BURRAGE, ESQ., WALPOLE, MASS.

MESSRS. KILHAM & HOPKINS, *ARCHITECTS*

(For additional illustrations of this house, see plate section)

ing valve much like those used on gas grates for the ordinary carburetor. Any man who has ever owned an automobile knows what this in itself will mean in the way of eliminating trouble. The constant speed factor has also made it possible to utilize air cooling which at once eliminates all the trouble of overheating in warm weather and of freezing during the winter months. The influence of the automobile is again seen in the fact that the best isolated lighting plants are self-cranking, the pressure of a finger on the starting switch being enough to put the generating unit in operation. The attention required from the owner of the plant is also lessened by the fact that the generating unit stops automatically when the battery becomes fully charged. In reality, the time and attention required by the plant is no more than the amount necessary to fill the fuel tank (gasoline, kerosene, or natural gas may be used for fuel), to add occasionally to the oil supply in the crankcase of the engine, and to see that the cells of the storage battery are kept well filled with pure water. In exchange for this almost negligible amount of care and attention, the isolated lighting plant will give to its owner the same kind of electric light and power service which he enjoys in his city home at a cost in no case greater and in many cases less than he has to pay for electric current in the city. The current furnished by his plant will give all the light desired in every room of his house, garage, or barn and will, in addition, furnish electric power by means of which he may operate automatic pumping systems supplying running water to all parts of his home, electric fans, washing machines, vacuum cleaners, and all the other light and power appliances used in the city home. In case the

prospective country home owner expects to go in for "gentleman farming" he will also find that the electric plant will furnish plenty of current for the operation of milking machines, cream separators, churns and other farm power appliances.

But the feature of the best isolated lighting plants manufactured to-day which will be of the greatest interest to the architect is that of real dependability. They can actually be counted on to supply electric light and power to the country home or clubhouse every hour out of the twenty-four and to continue to do this day after day and week after week with no more care and attention than described above. It is also interesting to note that modern manufacturing methods and large production facilities have made it possible to produce plants of this type which sell for as low as $275 complete.

The ability of electricity to take city conveniences and comforts into the country will undoubtedly act as a stimulus to the building of country homes, clubhouses, inns and other buildings of this general class, and the assurance that economy and dependability may be expected of the isolated plant will in all probability eventually lead architects generally to make plans and specifications with a view to the use of electricity, regardless of where the proposed building is to be located.

Notice of Removal

On May 1 next THE AMERICAN ARCHITECT will remove to its new offices at No. 243 West 39th Street, New York.

Personals

Messrs. Glucroft & Glucroft, architects, announce the removal of their offices to 729 Flushing Avenue, Brooklyn, N. Y.

Mr. Raymond B. Spencer, architect, Jackson, Miss., has opened a branch office at Clarksdale, Miss., in charge of Mr. Lyman Abbott. The business will be conducted under the firm name of Spencer & Abbott, 315 McWilliams Building, and catalogs and samples are desired.

Co-operating with the Government

Mr. Grosvenor B. Clarkson,
Secretary of the Council of National Defense,
Washington, D. C.

Dear Sir:

After consultation with our Board of Directors, the United Publishers Corporation has decided to offer to all Departments of the United States Government, the absolute co-operation of our industrial publications, covering many leading industries of this country, both in the matter of editorial co-operation and the free use of advertising space, for the purpose of assisting the Government in the mobilization of our industries, publicity in methods of finance and the promotion of any project undertaken by the Government during the present condition of war.

We cover the Iron, Steel and Machinery industries through the

Iron Age	New York
Hardware Age	New York

The Automobile and Motor Truck industry through

Automobile	New York
Motor Age	Chicago
Commercial Vehicle	New York
Motor World	New York

The Shoe industry through the Boot & Shoe Recorder of Boston.

The Building industry through the

The American Architect	New York
Building Age	New York
Metal Worker	New York

The Dry Goods field through the

Dry Goods Economist	New York
Dry Goods Reporter	Chicago
Drygoodsman	St. Louis
Pacific Coast Merchant	San Francisco

We shall seek to interest the active co-operation of these important business interests in their local centers and shall hope to especially assist in placing the Bond issue without expense to the Government.

In any of these matters your commands will receive our prompt and immediate attention.

Your very truly,

(Signed) H. M. SWETLAND, President,
UNITED PUBLISHERS CORPORATION.

New York, April 10, 1917.

WATER SUPPLY AND SEWAGE DISPOSAL FOR COUNTRY HOUSES

By GEORGE L. ROBINSON, *M. Am. Soc. C. E.*

ONE of the most important and interesting problems facing the owner who proposes building in the country is that of water supply. So much depends on its successful solution that even the design and location of the house is governed in part by that end. At the same time thought should be given to the proper disposal of sewage. These two problems are indeed most intimately related, as the selection of one frequently determines the location and design of the other. Good, clear, pure water and plenty of it, must be found, its source protected from any suspicion of contamination and ample provision made for storing and supplying adequately all buildings, lawns and gardens.

The water source may be from surface, spring, deep or flowing well. The surface supply frequently offers great advantages—as, for example, a mountain brook passing through restricted lands. Here the stream yields abundant supply which, by the use of small dams, may provide storage and sedimentation to carry over any summer drought. There is also the possibility of pumping by rams if it is impossible to carry the water by gravity.

Surface systems are, however, always under suspicion of contamination, as there is the chance ever present of pollution in some unforeseen manner.

Springs are perhaps the ideal source of supply. When a property is fortunate enough to have an ever-flowing spring the analysis of which shows an absence of contamination, it is a prize indeed. A masonry reservoir for impounding several days' storage with a gravity distribution system furnishing unlimited pure, cold water is priceless. Even though this spring water might need a pumping plant, it requires the simplest form of machinery and little attention.

Deep wells, of course, are so common and in most cases so satisfactory that, though no other water is available, yet by drilling in a properly selected place with depth and size of bore enough, one can as a rule find water in quantity and quality.

Deep well water is in most cases pure as it is taken from such depths that there is no chance of surface pollution. Of course, care must be given to the nature of the drilling. It is well to carry the casing down far enough below the rock surface to properly block off and seal carefully the casing with the solid rock so no chance of well contamination may develop by unclean ground water percolating down the side of the casing or entering from the surface at the pump head openings. In gravel or sand formation the casing is, of course, carried down the full depth of the well to the straining point.

Pumping machinery for deep wells is simple enough and the cost is measured largely in the size of the equipment, viz., the depth of the well and the amount of water to be pumped and against what head.

The flowing well as found in parts of Long Island and in some other places brings to the surface the water without deep well pumping equipment. Here it is only necessary to impound the flow to such an extent as to offer a reserve for the supply to the estate.

In any case, the pumping and the mechanical parts of a water supply must meet the requirements at hand so they may give the maximum supply needed under minimum production conditions.

It is not wise to cut down on water supply as the overhead charge on an adequate plant is more than made up by the saving of money and inconvenience due to failure in time of most need.

The owner should survey his property *first* for surface supply free from pollution and of adequate and sustained flow. *Second*, for springs fulfilling the same requirements. *Third*, in the event of neither of the foregoing being available, he should make careful study as to the geological

HOUSE OF C. B. FARIS, ESQ., ST. LOUIS, MO.

HOUSE OF JOHN ALLEN LOVE, ESQ., ST. LOUIS, MO.

MR. GUY STUDY, *ARCHITECT*

(Floor plans not available)

formation of his land to determine the best location for a driven well. Much useful information can be obtained from the U. S. Government departments' surveys and from the State Geologist.

Further information should be gathered from the experience of his neighbor as to the wells—depth, yield, quality, etc. There are a number of expert well drilling firms who are able to express opinions formed from local experiences which will be found of the utmost value.

Fourth, after the supply is obtained the owner must determine how much water he needs in reserve—if for gardens, fire protection or only for domestic use. This will make the basis of the plant and indicate the nature of the system. It may be masonry reservoirs, steel pressure tanks, etc., in conjunction with deep well pumping engine with electric, gasoline or oil burning drive. Here the opinions of an expert should come to hand as the selection of equipment is one which requires knowledge and experience in this special subject.

There are some cases where the introduction of compressed air as a lifting device offers advantages not only as a pumping method but also for supplying a degree of aeration which is essential to stimulate the water. Some deep wells show discoloration due to iron or other mineral ingredients in solution. This can be as a rule taken out by filtration through bone charcoal or other mediums. There seems to be no reason to believe that the hardness of water has any injurious effects on the digestive system. There is every reason, however, to find and use soft water, as it lends itself so much more readily to domestic uses. When a water supply is not obvious and a number of points requiring judgment and experience develop, the owner or his architect will save time, worry and money by consulting with an expert.

A word of warning might be well as to the proper protection of the well head opening and the casing against pollution. While the filtering action of soil is an important factor in the purification of water and, broadly speaking, is an almost perfect filtering agent, yet it should be borne in mind that if the ground around a well curb opening or the floor of a pump house is permitted to become foul, that there is quite a real chance that some impure water might reach the well either directly through the opening in which the pump rods work or by percolation down the sides of the casing, or if it is a dug well by direct percolation through the super-saturated soil.

A stream used for drinking water should be protected as much as possible from the waste of fields where the ground is extensively manured or polluted.

Sewage Disposal

THE treatment of sewage has now developed far beyond any of the methods known even fifteen years ago. Of course, this is more particularly true of problems involving sewage treatment for institutions, large country hotels and the like, although it does follow in the smaller installations for country houses. All of the newer homes are liberally supplied with bathrooms and kitchen equipment. This produces a much larger amount of domestic sewage per capita than was formerly the case. The disposal plant must be a sanitary measure so designed that it may digest or mineralize the organic matter to the highest degree and at the same time separate and hold it back from the water which carries it from the house. It is usual to assume that one hundred gallons per person per day is the measure of domestic sewage from a country house, taking into account all the plumbing fixtures.

Hence, with an average population of ten, it is fair to say that there will be from nine hundred to twelve hundred gallons per day to be treated and disposed. The old system of broad disposal—that is, of discharging the sewage water directly on the ground after passing a small screen, is now to be avoided. This method offers the most serious objection in that it exposes bits of disease-carrying organic matter in such a way that flies and other insects are sure to bring infection back to the house. After all that has been said and written of this danger it is astounding to find once in a while an owner who will permit the installation of so dangerous a plant.

Sewage on private places should always be treated underneath the soil. First, by means of a properly designed digestion tank, and second, by sub-soil filtration in one of its many forms.

The tanks may be circular, oblong, or other shape in plan, but so arranged in depth and capacity that the organic matter is properly decomposed and broken down. Quite a good many specially designed tanks for private plants have been tried out of late with some degree of success. It is the writer's experience, however, that what is gained in the digesting function is lost in the care which is required in operation and the much greater cost in the initial installation. Of course, for institutions with a relatively large population some form of "double-deck" tank has advantages in that it minimizes the sludge production, treats the sewage at a higher rate and is less apt to give off odors.

For private houses the water which carries the solids from the house passes through the tank and is discharged intermittently by means of an automatic siphon into the filter or absorption area beyond. The absorption of the water from the digestion or settling tank is brought about by distributing evenly over an area which, in the opinion of the engineer, is adequate for the purpose.

This is accomplished by laying a series of special sewage irrigating tiles (which are furnished in several models) in shallow trenches not over two feet deep, following the contours of the ground as nearly as possible.

As a rule, the field is divided into two or more sections or areas. The flow from the siphon is diverted by means of a valved cast iron gate placed in such a way that the effluent passes into the first, second or third area, as may be desired. The nature of the soil—whether gravel, loam or clay—determines the number of linear feet of tile necessary for each case in hand. In heavy soils it is frequently desirable to fill in the trenches around the tile with broken stone, gravel or cinder to aid in the absorption. Again, when conditions are most difficult, a complete filter area is constructed by excavating the entire surface and filling in with some proper filter material. In such a case as this undermains are laid and the purified effluent is allowed to pass off on the surface of the ground.

Under normal conditions the tile-trenches will dispose of something more than two gallons per foot per day. The diverting gate should be turned by someone on the place once every week so that each field may have a week's rest while the next one in its turn is at work. These plants operate successfully both winter and summer. The fields may be placed at any convenient place where the fall or grade from the house permits. They may be under a lawn or even in a garden. The tanks should be cleaned out about once each year. That is, the organic matter which forms as a floating mat should be removed to prevent clogging and too much decrease in volume in the tank. This matter may be composted with other manure and used as fertilizer, though not over vegetables which are to be eaten raw.

The success of a sewage disposal plant depends very largely upon the care with which it is installed. Expert workmen should be employed who understand the placing of the tile lines to proper grades and who use the utmost care in back-filling the trenches. There are a number of firms in New York who undertake this work and guarantee the plant as to material and workmanship. When it comes to plants of larger size a number of elements enter the design which demand quite a different form of treatment. For an institution of some three thousand persons the sewage production may run up as high as four hundred thousand gallons per day. Here special liquefying tanks treat the solids, filters of numerous types purify the effluent, and lastly, complete sterilization can be brought about by chloride of lime solution or liquid chlorine properly applied. Special apparatus is available for dosing the filtrate, and such plants as above outlined are usually acceptable to State Boards of Health.

There are no two problems which should receive more careful thought than water supply and sewage disposal. They are intimately related, both requiring knowledge, skill and judgment in design and installation.

LIVING ROOM, LOOKING TOWARD DINING ROOM

THE DINING ROOM, PANELLED IN OAK, STAINED A DARK BROWN. WHITE PLASTER CEILING

ADDITION TO HOUSE OF SPENCER K. MULFORD, ESQ., WYNCOTE, PA.

MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*

(For additional illustrations and description see text pages)

LIVING ROOM—HOUSE OF SPENCER K. MULFORD, ESQ., WYNCOTE, PA.

(For additional illustrations of this house, see plate section)

Addition to Residence of Spencer K. Mulford, Esq., Wyncote, Pa.

WALTER T. KARCHER & LIVINGSTON SMITH, *Architects*

AT the head of a great sweeping rise of lawn this residence, several times improved, commands a fine view over the surrounding valley. The *raison d'etre* of this alteration was the need of a roomy library, new arrangement and increase in bedroom space above and the desire for amplification and improvement of the dining room. Various alterations throughout the house were made at the time, but they were of distinctly practical rather than esthetic value.

The library connects by an alcove with a fine Gothic hall, and by the archway shown, directly with the dining room. The steps were added purely for effect. In treatment it was purposely attempted to blend several periods of the Gothic work in order to obtain the atmosphere of those English rooms that have this atmosphere only because they have been worked over by generations of changes.

The dining room was held to stricter period lines. The ceiling of the Cabinet of Cardinal Wolsey at Hampton Court was freely used as an inspiration for the plaster work. The furniture is old, and special space was provided for the antique buffet.

The oak in the dining room is brown, while in the living room it has an aged gray cast, which contrasts well with the antique ivory ceiling and the maroon tile of the floor.

The principal bedroom is in light silvery gray, the same as the furniture, and like the latter, the woodwork of the mantel contains real wedgewood inserts. This light color is enlivened by the richness of the hangings and the rug.

WILLIAM ROTCH WARE

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, MAY 2, 1917 NUMBER 2158

WILLIAM ROTCH WARE

1848-1917

WILLIAM ROTCH WARE, who was editor of this magazine during a period of 31 years, and under whose hand it grew from the modest little journal illustrated with scanty pen outline lithograph drawings into its present form, has just passed away at the age of 69 years at his home at East Milton, Mass. He saw the art of printed reproductions of works of architecture pass through all the succeeding phases of processes from the gelatine plates, including colored photographs, to the halftone processes and the zinc cuts in use to-day.

It was under his management when the magazine was published by Ticknor & Co., of Boston, that he brought out the so-called International Edition with plates from English, French and German magazines. When Ticknor & Co. sold the paper, Mr. Ware came to New York and started the publication work here. His deafness, which had for some years been a heavy handicap, had increased to such a degree that he then retired from the work which had come to be almost the habit of a lifetime with him, and settled back to a happy domestic and rural environment in the home he had built at East Milton, surrounded by a large family of sons and grandchildren.

Mr. Ware was one of the first Americans to go to the Ecole des Beaux Arts. Born in Cambridgeport, of old New England stock, who trace their ancestry back to the time of the Pilgrims, he was educated at Exeter Academy at Harvard, from which he graduated in 1871, and at the Institute of Technology, where his uncle, the famous Professor William Robert Ware, was beginning his career as the greatest of our teachers of architecture. Mr. Ware returned from the Beaux Arts to find Boston a heap of smoking ruins from the great fire in Summer Street. His uncle urged him—just engaged to be married—to take the assistant editorship of THE AMERICAN ARCHITECT, under Mr. William P. P. Longfellow, brother of the poet. He did so, and ultimately succeeded Mr. Longfellow as editor-in-chief. He never saw his way open to give up the work for the practice of the profession for which he had so arduously fitted himself. He used to feel at times that he had been what he called "sidetracked," but no one realized better than he the power for the good of pure architecture that his position gave him, and he utilized it to the full. H. H. Richardson, with all his exciting novelties, came before the public through THE AMERICAN ARCHITECT of those days. Peabody and Stearns, Emerson and a host of artists, as one may properly call the Boston group of that day, who, inspired by Richardson, practised architecture for the flavor of it. They were all presented to the public by Mr. Ware's cordial support. It was he who organized the American Architect drawing office, a central bureau of expert draftsmen, of whom the late D. A. Gregg was the leader who might be called upon to make rendered perspectives in pen and ink or color, the picturesque architecture then in vogue requiring that form of presentation, and to supplement the force of the average office not equipped with men of that order.

Mr. Ware loved a good drawing, espe-

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cially one well calculated for reproduction. He organized a competition amongst the best pen and ink artists of that day, and the resulting drawings are still standards of style for those fortunate enough to possess them. Francis H. Bacon's, Harry Fenn's and Wilson Eyre's were the favorites.

Mr. Ware published various monographs of American architecture, "Renaissance Doorways," "Door and Window Grilles," "Ecclesiastical Domes" and "Topical Architecture," which appeared monthly. He wrote an exhaustive treatise on Equestrian Monuments, on which subject he gave an interesting series of lectures at the Lowell Institute. But his chief monument as a publisher remains in "The Georgian Period," a work which no architect can well do without, and too familiar to the reader to need description.

The editorials, as well as the general reading matter of THE AMERICAN ARCHITECT during Mr. Ware's editorship, set a standard both for their literary quality and for ideality, which have not been surpassed.

Retiring and unassuming to the point of shyness, Mr. Ware sometimes conveyed the impression of brusqueness of manner, but these deceptive externals resolved on closer acquaintance into a warmth of generosity, a cordiality of recognition of merit and a tenderness of heart rare among men.

Mr. Ware was a member of the Society of Beaux Arts Architects and the Boston Society of Architects, who have passed the resolutions printed below.

WILLIAM WELLES BOSWORTH.

RESOLUTIONS BY THE BOSTON SOCIETY OF ARCHITECTS

The debt which the profession of architecture owes to William Rotch Ware is something which is best appreciated by those who knew him from the very beginning of his connection with THE AMERICAN ARCHITECT. For thirty-one years he was the editor-in-chief, giving his time, his thought and often his money in the most generous manner and with a loftiness of aim and a singleness of purpose which the profession can never sufficiently recognize. When he began his career architecture was a little less professional than the occupation of the house carpenter. When he retired from editorship the architectural profession had grown to be one of the foremost in importance in the development of the country. The Boston Society of Architects, of which he was one of the original members, by this motion expresses its appreciation of the services he has rendered so freely to the cause of good architectural and public service, a service which involved a degree of self-sacrifice few are willing to accept, but which was always offered for the good of his generation in unstinting measure. He leaves a record of which the Society, the profession and his friends and family may well be proud, and in extending to his family its appreciative sympathy, the Boston Society of Architects honors the man who has helped to make the Society possible and to give it a place in the community.

Resolved: that this motion be sent to the architectural press and be spread on the minutes and that a copy thereof be sent, with the sincere sympathy of the Society, to the family of Mr. Ware.

THE brief duration of what we may call the Modern Era in American architecture is recalled to us by the death of William Rotch Ware. The active portion of his life practically synchronized with the new developments in architecture, and those of us who remember the great part he played during the last quarter of the 19th century are disposed to assign to him a large and important part in our architectural Renaissance. As the editor of THE AMERICAN ARCHITECT, he was not only the pioneer in professional journalism, but through this means he undoubtedly did more than any other toward bringing to the attention of the general public the architects of the new school and their work.

Architecture is dependent for its success on expression and acceptance. It must put into visible form the best impulses of any time, but unless it can impose itself on a community as an adequate expression, it remains only the amusement and the voicing of the individual.

The architects who in the late seventies and early eighties began the great work of redeeming the art from the depths into which it had fallen in the middle of the century possessed, it is true, those qualities which enabled them to put into form the better impulses of the time. The buildings they constructed preached their own sermons, but their appeal was territorially limited, since it was confined to those who passed by in the pursuit of their avocations. THE AMERICAN ARCHITECT, under the brilliant and constructive direction of Mr. Ware, immediately and enormously extended this field, and therefore the work of the great pioneers—Richardson, Congdon, Haight, Renwick, Sturgis, Cummings, Peabody and Stearns, etc.—received that general publicity that ensured its acceptance. The name of William Rotch Ware is one that should never be forgotten by American architects, for it is not too much to say that equally with actual practitioners he did his part in the great work of redeeming American architecture, and sending it forward on new and constructive lines.

RALPH ADAMS CRAM.

MR. WARE was associated in our minds with all that was best and most constructive in architecture. Practising at a time when the appreciation of fine work was confined to a very small number, he was clearly in the front rank, pointing the way for others. As the guide for professional judgment, his work on THE AMERICAN ARCHITECT was invaluable. As a teacher he was conservative and sound, and yet able to give his pupils that enthusiasm and inspiration without which all teaching of the arts is but dry bones. The profession owes a lasting debt to Mr. Ware.

R. CLIPSTON STURGIS.

I FIRST met Mr. Ware more than thirty years ago, and until his recent retirement from THE AMERICAN ARCHITECT I had the pleasure of meeting him fairly often, always finding him exceedingly busy, earnest, of few words, and these to the point. I remember him as a very hard-working, dignified, plain-spoken editor, one who knew what it was to be an editor, and he really "edited" in every sense of the word. His ideals as to what an architectural paper should be were high, and he lived up to them, cost him whatever work and pains it might. There resulted from this marvelous devotion, those indefatigable efforts, an architectural journal which grew to be a power in the land, not only among the profession, but among the laymen—a power and influence which grew continually.

In those early years, his was the first architectural paper of any account of which I have any knowledge, so that he was a pioneer in his work, and few can conceive the amount of work required to produce a *weekly* paper of this kind. Its weekly advent was looked forward to by draughtsmen as well as the architects, and it was referred to by the press as the authority in the field of architecture of its time. All this was the work of one man. THE AMERICAN ARCHITECT was William Rotch Ware, and his work lives after him, unto these days.

As if this was not work enough for one man to do, he established and conducted

a "drawing office" connected with his paper. To this he attracted a galaxy of such brilliant draughtsmen as H. B. Pennell, E. Eldon Dean, William T. Partridge, Wm. Welles Bosworth and Mr. Campbell and Mr. Halden, and that bright particular star of all, the late David A. Gregg. Under his kind and solicitous care, affording them great opportunity, he thus played no small part in developing the art of architectural pen drawing and rendering to a degree never before attained.

In a remarkable "appreciation" of Mr. Gregg, contributed some months ago to the *Bulletin* of the Boston Society of Architects, Mr. Ware relates the story of Mr. Gregg's first appearance in his drawing office, and tells of his fostering care of this genius through so many prosperous years.

His paper was always dignified, was always published on schedule time, and was without doubt a great help as an intermediary between the profession of architecture and the lay public, placing the activities in a dignified and just light before all, aiming to impress on the public the dignity and nobility of a profession calling for as much of a man, at least, as is required in any of the learned professions, in times when the profession of architecture was even less understood than now.

All honor to the memory of this faithful, hard-working and devoted man, whose influence in this difficult field of professional journalism has had such a stimulating effect, who has done so much for architecture, and for draughtsmen, that it can never be forgotten.

J. A. SCHWEINFURTH.

The Tilden Memorial

A plaster model of a heroic statue of Samuel J. Tilden, which is to be cast in bronze by William Ordway Partridge, has been erected at Park Avenue and Thirty-fourth Street, New York. Though Mr. Tilden's will, when it was opened thirty years ago, provided a fund of $50,000 for a monument, litigation by his heirs and controversy as to who should be the sculptor prevented the carrying out of the provision until last May, when a suit brought by Mr. Partridge against George W. Smith and Lewis V. Randolph, who, with the late John Bigelow, were the Tilden executors, was mediated by former Park Commissioner Stover, and work was begun.

The statue will be ten feet high, two feet higher than the normal heroic dimensions, so as to fit in with the massiveness of the surrounding buildings. Supported by a broad block of Stony Creek granite, the statue will sit in an emplacement of the same pinkish stone, forty feet wide and fifteen feet deep, with seat parapets extending forward on both sides. The right parapet will be decorated with a bronze State seal, while the left will carry that of the city.

While one of the reasons for setting up the cast rather than the bronze is to permit the sculptor and the architects, Wilder & White, an opportunity to view the ensemble in association with its surroundings, it is Mr. Partridge's wish that the "man in the street" shall look at the work and say what he thinks of it. This is following out the method of Macmonnies, who last year put his fountain in City Hall Park for the public to see.—*Stone.*

HOUSE OF THOMAS A. McGINLEY, ESQ., SEWICKLEY, PA.
MESSRS. JANSSEN & ABBOTT, *ARCHITECTS*

THE CHICAGO ARCHITECTURAL EXHIBITION

THE Thirteenth Annual Architectural Exhibition held under the joint auspices of the Chicago Architectural Club, the Illinois Society of Architects and the Illinois Chapter of the American Institute of Architects was opened in the galleries of the Art Institute, Chicago, on April 5 and was continued until April 29. This presentation of architecture and the allied arts brings to a most successful conclusion the 1916-17 season of architectural exhibits.

The Chicago exhibition was a very satisfactory indication of the progressive spirit of the men of the Middle West and of the valuable and well-sustained cooperation on the part of architects and those engaged in the arts allied to architecture. Not only has it served very fully its purpose to gather into one comprehensive showing a record of good architectural achievement during the past year, but it is a further important addition to the propaganda of public education in good architecture, and crowns the educational work of the season now closed.

There was a time when what printers call "a stickful," or, at most, a few lines, was considered by the art editors of daily papers ample notice of an architectural exhibition. In fact, in many cases exhibitions were opened, ran their course, and were dispersed without any attention on the part of the daily press.

But the situation is different now, and we have before us many clippings, some two columns in length, giving with much detail an account of this exhibition.

That this fact proves the greatly increased interest of the general public in the art that surrounds them, a better appreciation and keener desire for further and reliable knowledge is, we believe, true. It is also proof that the art education of the masses is yearly becoming more perfect, that even the man on the street will now take time from the absorbing things that are a part of his daily

life to visit this and similar exhibitions that afford educational opportunities.

These things, more insistently apparent each year, prove the contention of those who believed that the art education of the masses would be achieved through exhibitions, popular lectures, good illustrated magazines and not perhaps so much a costly experience, of good architecture, and appreciates the fact that even in his lowest renting properties he must conserve elements of good design and artistic expression if he is to realize a fair rate of income for his principals.

These things are all so well known to architects that it is perhaps not necessary

ST. ALBAN'S CHURCH, RECTORY AND PARISH HOUSE, NEW YORK
MESSRS. STEPHENSON & WHEELER, *ARCHITECTS*
Thirtieth Annual Chicago Architectural Exhibition

through a slower process of instruction during school or college years.

Every architect knows that the client who consults him to-day is, as a rule, a more correctly informed one than he had to deal with a decade ago.

Even the real-estate agent, whose business is solely in the renting of buildings, has come to learn the value, often through

to set them down at any length, yet it may be well to take an opportunity like the present to refer to them, as showing how greatly have all these annual exhibitions contributed to these most satisfactory conditions.

The visitor to the exhibition here considered entered through a formal Italian

(*Continued on page* 283)

SKETCH OF UNION STATION, CHICAGO

MESSRS. GRAHAM, BURNHAM & CO., *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

THE MICHIGAN UNION; STUDENT AND ALUMNI HOME AT ANN ARBOR, MICH.

MESSRS. POND & POND, *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

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PROPOSED EDUCATION BUILDING, UNIVERSITY OF ILLINOIS, URBANA, ILL.

MESSRS. HOLABIRD & ROCHE, *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

GARRETT BIBLICAL INSTITUTE

MESSRS. HOLABIRD & ROCHE, *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

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VOL. CXI, NO. 2158 MAY 2, 1917

PRELIMINARY STUDY OF MAIN ENTRANCE, OFFICE BUILDING FOR LAIRD-NORTON CO., WINONA, MINN.

MESSRS. RICHARD E. SCHMIDT, GARDEN & MARTIN, *ARCHITECTS*

Thirtieth Annual Chicaga Architectural Exhibition

RAVISLOE COUNTRY CLUB, HOMEWOOD, ILL.

MESSRS. GEORGE C. NIMMONS & CO., *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

HOUSE OF GENERAL M. D. HARDIN, LAKE FOREST, ILL.

MESSRS. RICHARD E. SCHMIDT, GARDEN & MARTIN, *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

DETAIL OF ENTRANCE, HOUSE OF WILLIAM H. DAVIDGE, WESTON, CONN.

MESSRS. MURPHY & DANA, *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

ELEVATION

1917 TRAVELING SCHOLARSHIP OF THE CHICAGO ARCHITECTURAL CLUB; A SMALL LIBRARY IN THE COLONIAL STYLE

FIRST PRIZE AWARDED TO ROY LARSON

Thirtieth Annual Chicago Architectural Exhibition

FOUNTAIN AT COLD SPRINGS, L. I.

MISS JANET SCUDDER, *SCULPTOR*
MR. LAWRENCE GRANT WHITE, *ARCHITECT*

SWIMMING POOL FOR A. B. COXE, PAOLI, PA.

MR. CHARLES WELFORD LEAVITT, *LANDSCAPE ARCHITECT*

Thirtieth Annual Chicago Architectural Exhibition

HOUSE OF ANSON E. CARNILL, ESQ., RYDAL, PA.

MESSRS. JANSEN & ABBOTT, *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

HOUSE OF G. F. SWIFT, CHICAGO

MR. HOWARD SHAW, *ARCHITECT*

Thirtieth Annual Chicago Architectural Exhibition

BAPTISTERY, SIENNA

MR. ERICH GUGLER, AMERICAN ACADEMY IN ROME

A PARISH CHURCH

MR. HAROLD L. SMITH, ART INSTITUTE EVENING SCHOOL

Thirtieth Annual Chicago Architectural Exhibition

THE AMERICAN ARCHITECT

VOL. CXI, NO. 2158 MAY 2, 1917

A FLORENTINE BED ROOM OF THE 15TH CENTURY,
BEAUX ARTS PROJET

MR. C. BEIN, COLUMBIA UNIVERSITY

Thirtieth Annual Chicago Architectural Exhibition

TERRACE STEPS AND GARDEN, GIRDLE RIDGE, KATONAH, N. Y.

MR. CHARLES A. PLATT, *ARCHITECT*

LYCH GATE, RESIDENCE OF JAY COOKE, CHESTNUT HILL, PHILADELPHIA

MESSRS. OLMSTED BROTHERS, *LANDSCAPE ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

VOL. CXI, NO. 2158 MAY 2, 1917

A FRENCH DRAPER'S SHOP OF THE 14TH CENTURY

MR. K. C. WELCH, UNIVERSITY OF PENNSYLVANIA

Thirtieth Annual Chicago Architectural Exhibition

THE AMERICAN ARCHITECT

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VOL. CXI MAY 2, 1917 No. 2158

WILLIAM ROTCH WARE was identified with THE AMERICAN ARCHITECT from its very inception. Born in Cambridge in 1848 of ancestors who were native Americans since 1642, a graduate of Phillips Exeter, a member of the class of 1871 of Harvard, one of the first students of the Institute of Technology and subsequently a pupil of the Ecole des Beaux Arts at Paris, Mr. Ware came to his task unusually well fitted to represent the best side of American architecture. The real shaping of the paper, the forming of its policies and the carrying of them out without fear or prejudice was wholly his work. The recompenses were small, personal feelings and professional jealousies were quite as strong then as they are today, but he always knew exactly what he wanted to do, he had the highest ideals for the profession and for his paper, he saw the drift of public sentiment and how it could be harnessed to a purpose and he never lost faith in the possibilities of architectural development in this country. He was a man of absolutely unswerving devotion to his work, who gave every ounce of his energy and every moment of his time with unflagging devotion to what he believed should be and must be.

In 1876 reproduction methods were crude and uncertain and Mr. Ware had to develop everything from the barrenness of the old style English tee-square-and-triangle line drawing, which was all he had to deal with at first. The Heliotype Company, under his guidance, was developed to the production of photographic reproductions equal to the best we have now, and to raise the standard of drawing, he imported Mr. D. A. Gregg, set him to work in his office, pitted him against men like Hughson Hawley and Eldon Deane, with the result that by 1878 nearly every advance that has been made in improvement of methods of drawing and reproduction of same had already been tried out and brought to a considerable perfection by THE AMERICAN ARCHITECT. He carried his influence even further, organizing a drawing office in connection with the paper wherein many a clever and talented architect has received some of his best lessons in how to draw. But he never was content with the merely pictorial side of architecture. His editorials year after year were marked by a clearness of vision, directness of expression and an uplifting tendency which we but too often miss today in our architectural press. When Mr. Ware said a thing in the paper his readers could be pretty sure he was right; and this independent spirit, his desire to present the best in the very best manner, drew around him a company of writers on subjects architectural whose names became almost household words, such as W. P. P. Longfellow, Russell Sturgis, Professor Norton, Professor Ware, T. M. Clark, to mention only a few of those whose lifework is finished; and nearly every young architect of the times who aspired to grow in his profession, in turn appeared in the columns of THE AMERICAN ARCHITECT. To appreciate how much was accomplished under Mr. Ware's guidance one has but to compare the files of THE AMERICAN ARCHITECT during the first ten years of its existence with the corresponding files of a paper like the *British Architect* or the *British Builder*. Nothing was foreign to THE AMERICAN

ARCHITECT which had to do with good architecture; whether it was a question of builders' hardware or Oriental rugs, Greek sculpture or Low's household art tiles, the frieze of the Parthenon or the carving on Trinity Church; if it was good Mr. Ware got it.

The profession, therefore, owes a debt to this self-sacrificing, self-effacing, tireless worker which can never be adequately repaid. He has labored and we have entered into his labors, and American architecture of to-day is more indebted to him for what he did for it in those relatively barren years than to any other one factor of modern days. Measured by money, his reward was very small, but the thirty years of service he gave to this paper and to the profession entitle him to the best kind of reward in the esteem and the appreciative remembrance of all those who came in contact with him.

C. H. BLACKALL.

THE profession of Architecture, primarily one of the three great Fine Arts, is, unlike Painting or Sculpture, affiliated with many necessities of life which have little to do with Fine Art, excepting as they are dignified by it.

The members of this unique profession, which has a gamut from mere elementary structure and business to the ennobling of the greatest material achievements of man, are too often enshrouded in consecutive action, tangled in a jungle of detail, and neglect or forget the heights of their opportunity.

To these burdened men, the writer, the editor with high ideals and even justice, is an apostle, refreshing their desires, blazing their paths.

And when associated with elevation of purpose is a pertinent directness of expression that brooks no equivocation there results a marked impression upon those to whom the words are addressed.

To this type of beneficial influences in the Architectural profession belonged William Rotch Ware, who after being educated as an architect, became for thirty-one years the Editor of THE AMERICAN ARCHITECT from 1876 to 1907. When he began his editorial work, despite the existence of admirable Colonial work, the Architecture of America was in a "parlous state." The Department of Architecture of the Massachusetts Institute of Technology had graduated only seven small classes, and was the pioneer of the numerous schools established later. The theses of the seniors would now be considered feeble freshman work.

In this adolescent stage of an Art which at its best to-day is the peer of that of any other country, appeared THE AMERICAN ARCHITECT as a forum, a channel of communication with the public. It became under Mr. Ware's hand a stimulating power, intelligent and fearless. His editorials were recognized by similar journals abroad, his opinions compelled attention. His sturdy, sometimes brusque, personality was the embodiment of an earnest, sincere mind, so sensitive that it distrusted suavity.

He himself considered his work evanescent, and regretted that he had never practised his profession, but his influence was far wider with the pen than is permitted to most men with the pencil.

It is much, that at the period of the stumbling growth of Architecture in America, there was so wise, so sane a mentor as William Rotch Ware.

C. HOWARD WALKER.

HOUSE IN WINNETKA, ILL.

MESSRS. OTIS & CLARK, *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

HOUSE OF CHARLES H. SCHWEPPE

MR. FREDERICK W. PERKINS, *ARCHITECT*

Thirtieth Annual Chicago Architectural Exhibition

CHICAGO ARCHITECTURAL EXHIBITION

(*Continued from page* 278)

garden. Beyond the corridors, the large gallery was hung with tapestries and furnished with ancient chests and Gothic chairs, some of which were loaned by the Antiquarians of the Art Institute. In this section was also shown many fine examples of the work of the craftsman in iron.

The Dublin plan competition, given under the auspices of Lord and Lady Aberdeen, was a conspicuous note in the city-planning schemes. F. A. Cushing Smith of Amherst, Mass., the only American competitor and one of the successful men receiving honorable mention, had his drawing here. A plan for Ottawa, a civic center for Brooklyn, the plan for Grant Park, for St. Joseph Manor, Elkhart, Ind., and the city plan of Cleveland were shown. Among other town-planning schemes were the art museum and Forest Park development of St. Louis, the proposed civic center and improvements for Eau Claire, Wis.; Milwaukee River improvement and the plans for the Wisconsin State semi-centennial.

WATER COLOR SKETCH BY LAWRENCE BUCK

Thirtieth Annual Chicago Architectural Exhibition

In an architectural educational way there was interest in the exhibits from the American Academy, Rome, the Beaux Arts Institute of Design and from Cornell University.

The catalog deserves commendation. As usual, it is a handsomely made book, with illustrations of a value that give the publication a permanent place in every working library of an architect. Three prizes — $25, $15 and $10 — were offered by the joint exhibition committee for the best cover designs offered in competition. Emory Jackson, Charles Herrick Hammond and Thomas E. Tallmadge made the awards. Frank L. Venning won the first prize; Fitzgerald Simpson, second; Hubert A. Smith, third, and Allen M. Weary and Benjamin F. Olson, honorable mentions. Mr. Venning's design was used on the cover, and the other drawings were hung in the exhibition.

COUNTRY HOUSE OF E. L. KING, ESQ., NEAR WINONA, MINN.
MR. GEORGE W. MAHER, *ARCHITECT*

INTERIOR, HOUSE OF RALPH ISHAM, MONTECITO, CAL.
MESSRS. CHILDS & SMITH, *ARCHITECTS*

Thirtieth Annual Chicago Architectural Exhibition

Southern California Chapter, A. I. A.

The one hundred and sixth meeting of the Southern California Chapter of the American Institute of Architects was held on April 11, 1917.

Twenty-three members were present.

A number of guests attended the meeting, which was entirely informal. In fact, the entire order of business, including the reading of minutes, was set aside for the evening to permit of the presentation of an evening of entertainment by talent secured by the entertainment committee.

In the absence of the president, Mr. J. J. Backus, vice-president, and Mr. W. J. Dodd, a member of the entertainment committee, presided.

Following the most excellent program, a resolution of thanks was offered by Mr. A. F. Rosenheim, duly carried.

The meeting then adjourned.

Public Homes for the Poor

Announcement of an Exhibit and Competition in Respect to Architecture, Arrangement and Methods of Administration

The Committee on Public Charities of the National Conference of Charities and Correction announce a competitive exhibit to occur during the forty-fourth National Conference at Pittsburgh, Pa., June 6-13, 1917. The purpose will be to bring to public notice the best examples of management and plans of almshouses (or other public homes for the poor, county infirmaries, county hospitals, etc.) in the United States and Canada.

The details of the exhibit and competition will be arranged by the Committee of Judges, of which Mr. Francis Bardwell, Inspector of Almshouses of the Massachusetts State Board of Charity, is chairman. Mr. Alexander Johnson, author of "The Almshouse"; R. F. Almirall, architect, New York City, and Dr. R. K. Flannagan, Assistant Commissioner, Virginia State Board of Health, are members of the committee.

Appropriate publicity will be given the exhibit and results of the competition.

For further particulars address Mr. Francis Bardwell, care of National Conference of Charities and Correction, 315 Plymouth Court, Chicago.

Notice of Removal

THE AMERICAN ARCHITECT has removed to its new offices, No. 243 West 39th Street, New York.

Personals

Messrs. Lansing, Bley & Lyman, architects, announce the removal of their offices to 250 Delaware Avenue, Buffalo, N. Y.

Mr. Harry Leslie Walker, architect, announces the removal of his offices from 103 Park Avenue to 19 West 44th Street, New York City.

Mr. C. L. Butler, architect, has opened an office in Tulsa, Okla., and will be pleased to receive manufacturers' catalogs and samples.

Mr. Robert A. MacKellar, architect, has opened an office for the practice of his profession in the Eisner Building, Red Bank, New Jersey, and desires to receive manufacturers' samples and catalogs.

Mr. Lewis Miles Sanders, architect, has opened an office for the practice of his profession at 1907 Nebraska Avenue, Chicago, Ill., and would be glad to receive manufacturers' samples and catalogs.

Mr. H. B. Hiltz, architect, 141 Milk Street, Boston, Mass., has taken into partnership with him Mr. O. C. Janssen. They have opened offices under the firm name of Hiltz & Janssen, 88 Broad Street, Boston, and will be glad to receive manufacturers' samples and catalogs.

Mr. Gerard W. Betz and Mr. W. Kenyon Drake, architects, announce that they have formed a partnership for the practice of architecture, under the firm name of Betz & Drake, with offices at 56 Second Street, Newburgh, N. Y., and would be glad to receive manufacturers' samples and catalogs.

CHAPIN MEMORIAL PRESBYTERIAN CHURCH, NILES, MICH.

MESSRS. TALLMADGE & WATSON, *ARCHITECTS*

FARM BUILDINGS, GREENWICH, CONN.

MR. W. F. DOMINICK, *ARCHITECT*

Thirtieth Annual Chicago Architectural Exhibition

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DETAIL OF WALL OF THE UNIVERSITY, SALAMANCA, SPAIN

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, MAY 9, 1917 NUMBER 2159

CHANCELLERIE d'ORLÉANS, PARIS

DESTRUCTION due to civic improvements demanded by greater city requirements now hovers over yet another of the old hôtels of Paris. From time to time we have recorded in these columns preservation or destruction of a building of this type in the one-time *Ville lumière* that has adopted the colors of war, has sent forth its architects to the Marne, the Somme and the Aisne and has cared for its wounded in the very drafting rooms of the Ecole des Beaux Arts that gave them their training. Such of these architects as have been spared, because of their age, by the call for human material, have found a brief respite from the great political problems of the War of all Europe to plead for the Hôtel de la Chancelleries d'Orléans situated in the little old and uninspiring Rue des Bons Enfants and extending back to the Rue de Valois within a stone's throw of the Palais Royal.

ORIGINAL GARDEN FAÇADE, ALTERED AND NOW FACING ON RUE DES VALOIS

The Chancellerie d'Orléans may be ascribed to the early eighteenth century and to Germain Boffrand in particular, but the character of its fine pedimental entrance on the Bons Enfants, which dominates the entire façade as it now appears is the remodeling by C. de Wailly under Louis XVI and probably after 1782, to which are due especially the mutules, dentils and guttæ at the broken horizontal cornice of the pediment and the long deep grooves or sinkages at the masonry joints in the main body of the entrance, not to mention the decorated soffit of the window arch above the pediment.

While the plan of the building is not a marvel of ingenuity—the regular dimensions of the site, contrary to the problems at hand in the majority of Paris hôtels, having been a great convenience to the original designer—it is, nevertheless, a thoroughly typical example of its time. From the monumental entrance above mentioned one enters a barrel-vaulted passage decorated with *caissons* or coffers in classic manner, the walls below treated with niches containing figures suggesting in style the beginnings of the Empire manner and probably added at that time. All of these decorative features, as well as certain other panel motives containing figures symbolic of the seasons, so frequently used in this manner during the eighteenth century, have in more recent times been covered with coat upon coat of plaster and paint, so that their present appearance more nearly resembles the sort of thing that might be expected from many a commercial modeler of to-day.

The passage leads directly to an interior courtyard, semicircular in plan toward the entrance. This is now largely obstructed by metal trusses supporting a

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DETAIL OF WALL OF THE UNIVERSITY, SALAMANCA, SPAIN

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THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, MAY 9, 1917 NUMBER 2159

CHANCELLERIE d'ORLÉANS, PARIS

DESTRUCTION due to civic improvements demanded by greater city requirements now hovers over yet another of the old hôtels of Paris. From time to time we have recorded in these columns preservation or destruction of a building of this type in the one-time *Ville lumière* that has adopted the colors of war, has sent forth its architects to the Marne, the Somme and the Aisne and has cared for its wounded in the very drafting rooms of the Ecole des Beaux Arts that gave them their training. Such of these architects as have been spared, because of their age, by the call for human material, have found a brief respite from the great political problems of the War of all Europe to plead for the Hôtel de la Chancelleries d'Orléans situated in the little old and uninspiring Rue des Bons Enfants and extending back to the Rue de Valois within a stone's throw of the Palais Royal.

ORIGINAL GARDEN FAÇADE, ALTERED AND NOW FACING ON RUE DES VALOIS

The Chancellerie d'Orléans may be ascribed to the early eighteenth century and to Germain Boffrand in particular, but the character of its fine pedimental entrance on the Bons Enfants, which dominates the entire façade as it now appears is the remodeling by C. de Wailly under Louis XVI and probably after 1782, to which are due especially the mutules, dentils and guttæ at the broken horizontal cornice of the pediment and the long deep grooves or sinkages at the masonry joints in the main body of the entrance, not to mention the decorated soffit of the window arch above the pediment.

While the plan of the building is not a marvel of ingenuity—the regular dimensions of the site, contrary to the problems at hand in the majority of Paris hôtels, having been a great convenience to the original designer—it is, nevertheless, a thoroughly typical example of its time. From the monumental entrance above mentioned one enters a barrel-vaulted passage decorated with *caissons* or coffers in classic manner, the walls below treated with niches containing figures suggesting in style the beginnings of the Empire manner and probably added at that time. All of these decorative features, as well as certain other panel motives containing figures symbolic of the seasons, so frequently used in this manner during the eighteenth century, have in more recent times been covered with coat upon coat of plaster and paint, so that their present appearance more nearly resembles the sort of thing that might be expected from many a commercial modeler of to-day.

The passage leads directly to an interior courtyard, semicircular in plan toward the entrance. This is now largely obstructed by metal trusses supporting a

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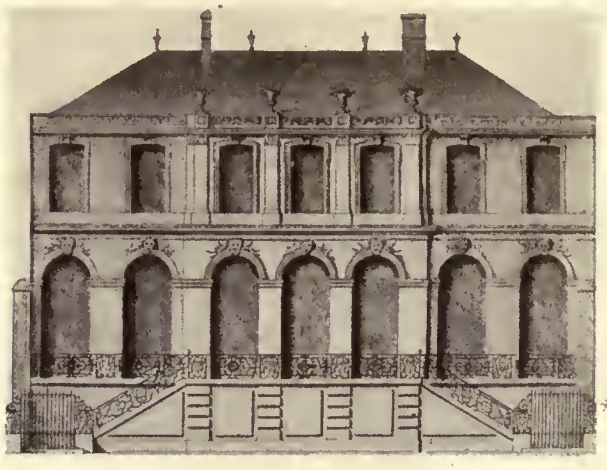
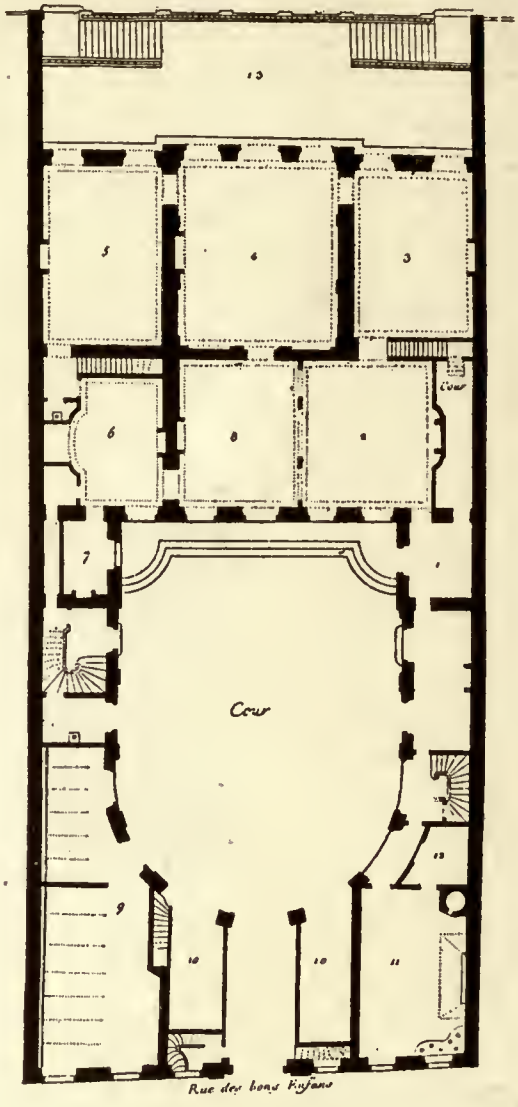
glass roof, while other projections built out at higher levels have completely modified the interior façades on the courtyard, with the exception, perhaps, of the principal façade at the base of the court, which still retains a portico with four Doric columns upon a stylobate raised several steps. The original plan, as illustrated in Germain Boffand's *Livre d'Architecture*, shows the arrangement of large rooms behind this façade; it would seem that the principal salons must be sought on the next higher level of the building, but these lower floor rooms gathered an added importance because they gave upon the gardens of the Palais Royal. On the ground level Boffrand's



GARDEN FAÇADE TOWARD PALAIS ROYAL (AFTER BOFFRAND) ORIGINAL DESIGN

plan likewise indicates various waiting and attendants' rooms and, as was customary at the time, the stables, accessible from the courtyard. It is noteworthy that stables and kitchens appear at the front of the house. The disposition of stairways is also interesting. In fact, it is a fascinating study to follow through the Renaissance the growth of the French architect's understanding of the problem of circulation facilities presented in city hôtels of the type of Chancellerie d'Orléans or in château planning. A glance at Boffrand's book above mentioned or at Jacques Androuet du Cerceau's *Les Plus Excellents Bastiments de France* or at Blondel's *L'Architecture Française* will offer suggestive avenues of thought on the development of residence planning. It is a constant surprise for the modern, likewise, to miss in these old plans the usual space allotment for interconnecting corridors, for sanitary conveniences and plumbing and for built-in closets.

Turning now to the rear façade of the Chancellerie we find again a four-column portico, but of the Ionic order and sur-

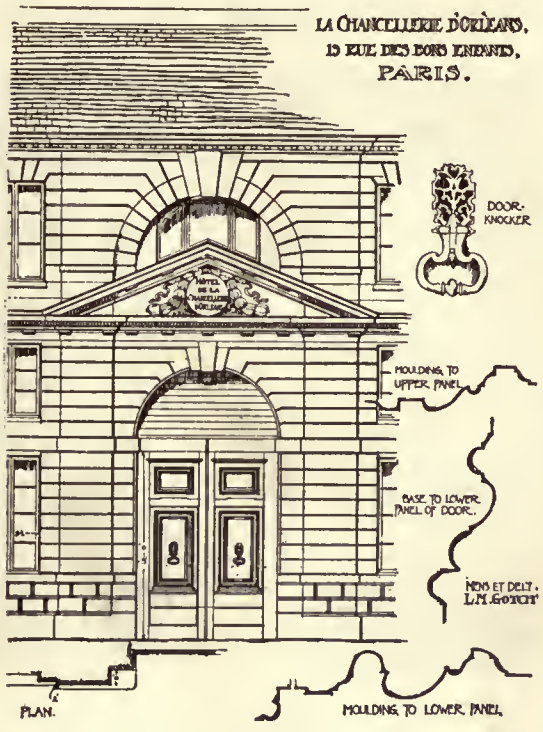


PLAN AS ORIGINALLY DESIGNED (AFTER BOFFRAND)

Note: In its present state the plan will show, among others, the following alterations: Fireplace in No. 4 transferred to opposite (north) wall; alcove and cabinets behind No. 6 removed; fireplace in No. 2 removed.

mounted by a balustrade with vases carrying up the axes of the shafts. This façade also underwent extensive alterations, as a comparison with the first architect's own illustration will show. Originally this front faced the gardens of the Palais Royal, but when the Rue de

Valois was cut through in 1781-1784 its effect was measurably reduced, for other buildings were erected at both sides and set forward to the building line of the new street and the Chancellerie therefore seemed set back in a pocket. By placing



ELEVATION, NEW FRONT BY DE WAILLY
(From *Ward: Renaissance Architecture in France*)

against the walls of adjoining buildings niches flanked by rusticated columns and surmounted by segmental pediments the poor effect of this architectural pocket was in part neutralized, although the niches themselves, as well as their sculptural embellishments, are entirely out of scale and ungainly besides. At a slightly later time low walls were built at the front line of the site and these with an arrangement of stairways and small terraces provided a more attractive entrance front for the building, but as is so often the case with similar efforts, the utilitarian side in such undertakings must not be considered. Under the second empire the famous pianomaker, Pape, occupied the premises, and added the present iron entrance grille and its gilded lyres. In the four window heads of the garden façade appear excellent reliefs, of which two are undoubtedly by Augustin Pajou, whose faithful imitation of the manner of Jean Goujon in these examples is remarkable. Other examples from his hand appear as part of the interior decorations.

For some time the building was known as the Hôtel Argenton because it was ultimately prepared as a habitation for Mlle. de Séry, the Comtesse de Argenton and mistress of Philippe d'Orléans from 1706 to 1710. It appears in Boffrand's book as the Hôtel Argenton because after various changes of occupants it reverted to the Orléans family, whose *chancelier*, the Count d'Argenton, there established his offices.

In interior decoration at this time Germain Boffrand had but one rival, Robert

DOOR IN *GRAND SALON*

de Cotte, and in the present building he bids fair to outdo his compeer. As was the case with the façades, the interiors likewise were completely modified at the close of the eighteenth century, although original lines were more or less closely

followed in a few cases of ceilings and doorways. Some original work by Pajou was retained, especially in overdoors, and

DETAIL IN DINING ROOM

likewise an excellent ceiling designed by Antoine Coypel in 1708 and other details by Durameau, Lagrenée and Briard.

The Chancellerie d'Orléans is a fine example of eighteenth century domestic architecture in France, both early and late, and, above all, of eighteenth century house planning in Paris. It is our earnest hope that if the widening of the Rue de Valois renders its continued existence on its present site impossible, the usual good judgment of the French government may

WALL DETAIL IN *GRAND SALON* (AFTER BOFFRAND)

be relied upon to preserve the building by transferring it to another location and making it a national monument, as was done but a short time ago with the old Hôtel Biron, which now houses a remarkable collection of sculpture by Rodin.

RICHARD F. BACH.

THE CURRENT ARCHITECTURAL PRESS

THERE is much discussion in current periodicals on the subject of art, particularly as to its future development and present methods of teaching. *The Journal of the American Institute of Architects*, in its March issue, contributes its quota. Architects, painters and sculptors are too busily engaged in the practice of their professions—in the actual production of art—to spend time in academic discussions of the various phases of art. For this reason there is undoubtedly much written and printed that practical artists can not take seriously, nor will they regard it as displaying intimate knowledge of the subject.

(*FROM THE ARCHITECTURAL REVIEW*)

DORMITORIES FOR DELAWARE COLLEGE, NEWARK, N. J. LITHOGRAPH, 1916

FROM THE DRAWING OF CHARLES Z. KLAUDER

It would seem that conditions affecting our National progress in art are steadily improving. We shall undoubtedly achieve higher planes, but we shall only reach them by the same slow processes that have marked similar advancement in other countries.

This issue of the *Journal* prints the correspondence between President Wilson and President Mauran of the Institute as to the part to be taken by architects in war time. There is also a timely and interesting article on the recent exhibition in Paris of Regional Architecture in the Invaded Provinces in France. The illustrations are of particular value.

Architectural sketches and office studies by Charles Z. Klauder, with an accompanying appreciative article, form the leading feature of *The Architectural Review* for March. This is the third of a series on Office Studies. Earlier articles were of the work of Charles A. Platt and York & Sawyer.

(*FROM THE ARCHITECTURAL REVIEW*)

HOUSE FOR R. C. SEELEY, ESQ., BRIDGEPORT, CONN.

MURPHY & DANA, *ARCHITECTS*

The illustrations are of some excellent country houses by Murphy & Dana, Mellor & Meigs and Duhring, Okie & Ziegler.

* * *

An interesting feature of *The Architectural Record* for April is a well-illustrated article by A. N. Rebori, describing the work of William E. Parsons in the Philippine Islands. We learn that at the

time of Mr. Parsons' appointment, some eight years ago, as consulting architect to the Government in the Philippine Islands, he was given general architectural supervision over the design of all public buildings and parks throughout the islands. The architecture of Spain had inspired all the design of buildings up to the time of the American occupation. The realization of the elemental character of the native population is said to have suggested to Mr. Parsons the reduction of the motifs of his design to similarly elemental expression. That this decision was logically sound appears to be indi-

(FROM THE INTERNATIONAL STUDIO)

MEMORIAL STATUE TO ALFRED GWYNNE VANDERBILT
BY EUGENE MORAHAN

cated by the numerous illustrations accompanying the article. Few men have had equally good opportunity to undertake an original and important work.

A city house in Minneapolis, designed by Marshall & Fox, is illustrated in this issue and described by Peter B. Wight. Alfred E. Bullock presents the third installment of his Series on English Architectural Decoration. The illustrations

(FROM THE ARCHITECTURAL FORUM)

INFIRMARY BUILDING, ST. PAUL'S SCHOOL, CONCORD, N. H.
R. CLIPSTON STURGIS, *ARCHITECT*

are measured drawings and photographs of decorative details originating in the fifteenth and sixteenth centuries.

The Porte-folio of Current Architecture contains illustrations of a library building in Montreal, Eugene Fayette, architect; some country houses by Marsh & Gette, and a miscellaneous illustration of a number of recently constructed buildings by George W. Maher.

* * *

Two clubhouses, one in Duluth, Minn., by Cram, Goodhue & Ferguson (New York office), and another in Cambridge, Mass., designed by Warren & Wetmore,

(Continued on page 295)

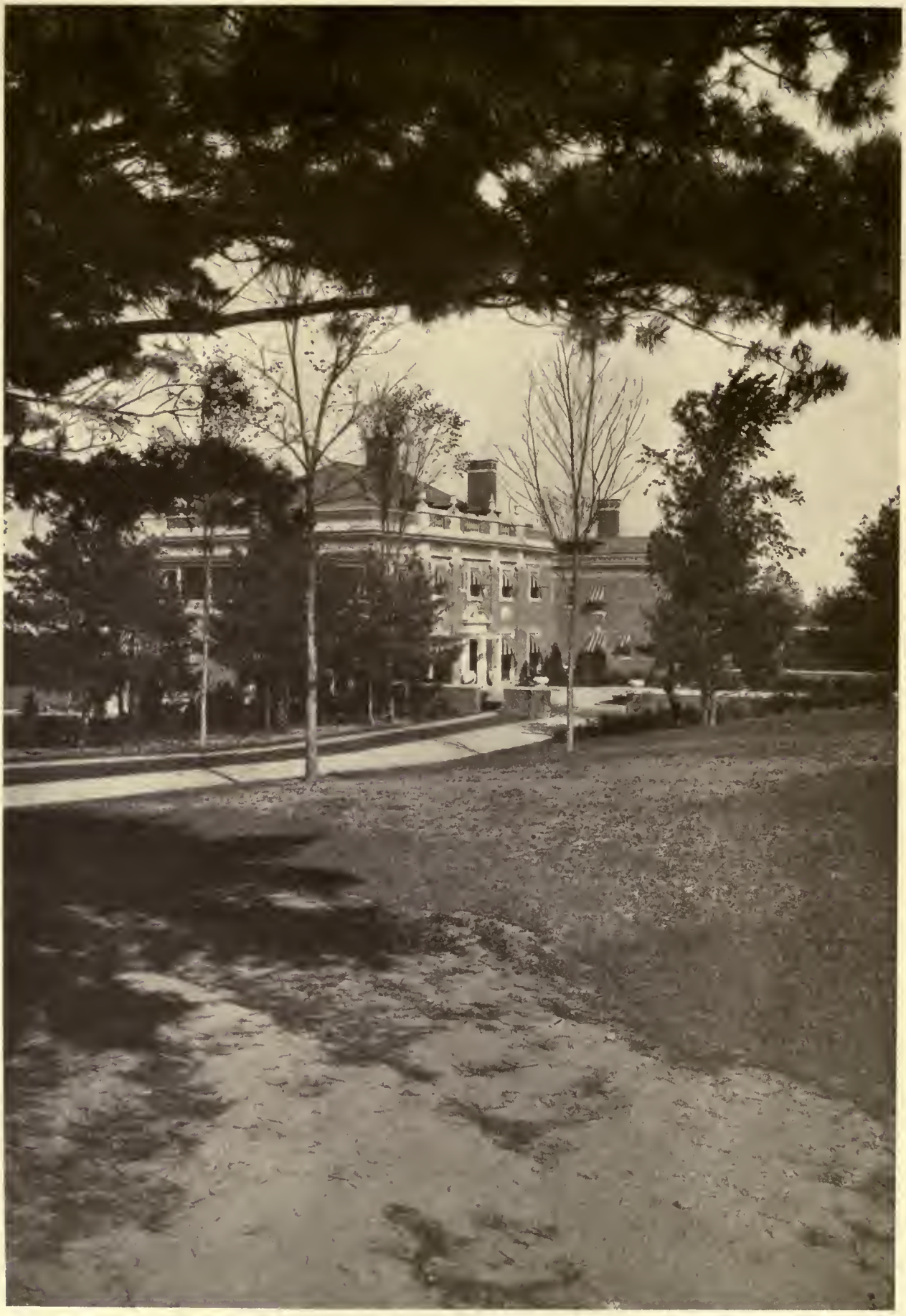
(FROM THE JOURNAL OF THE A. I. A.)

CHEMINON (MARNE)—AFTER A DRAWING

ENTRANCE FRONT

HOUSE OF FRANK R. WELLS, ESQ., BURLINGTON, VT.

MESSRS. MANN & MAC NEILLE, *ARCHITECTS*



ENTRANCE FRONT

HOUSE OF FRANK R. WELLS, ESQ., BURLINGTON, VT.

MESSRS. MANN & MAC NEILLE, *ARCHITECTS*
MR. RALPH M. WEINRICHTER, *LANDSCAPE ARCHITECT*

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A CORNER OF THE VERANDA

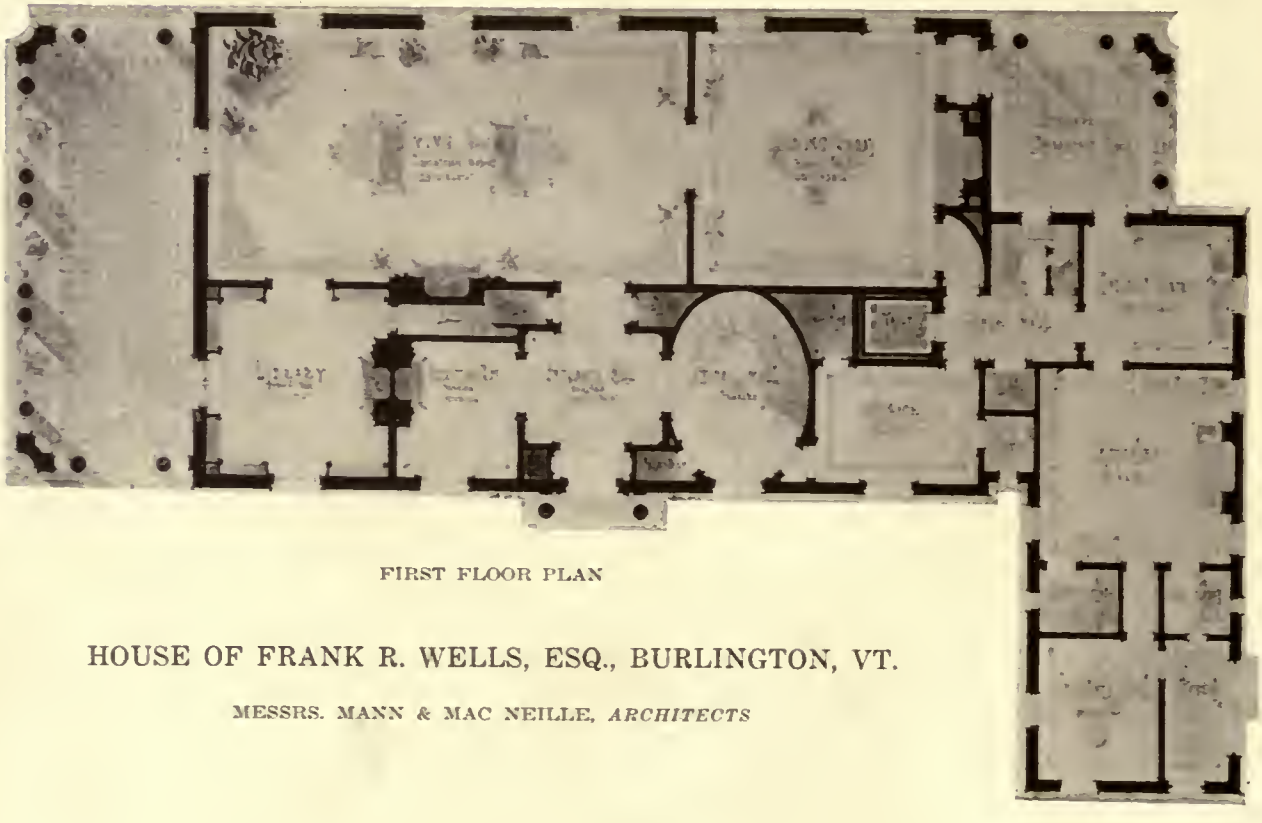
HOUSE OF FRANK R. WELLS, ESQ., BURLINGTON, VT.

MESSRS. MANN & MAC NEILLE, *ARCHITECTS*

MR. RALPH M. WEINRICHTER, *LANDSCAPE ARCHITECT*

2924

SECOND FLOOR PLAN



FIRST FLOOR PLAN

HOUSE OF FRANK R. WELLS, ESQ., BURLINGTON, VT.

MESSRS. MANN & MAC NEILLE, *ARCHITECTS*

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LIVING ROOM

HOUSE OF FRANK R. WELLS, ESQ., BURLINGTON, VT.

MESSRS. MANN & MAC NEILLE, *ARCHITECTS*

NO. 1. AN ENGLISH COTTAGE AT HARTSDALE, N. Y.

MESSRS. MANN & MAC NEILLE, *ARCHITECTS*

NO. 2. AN ENGLISH COTTAGE AT HARTSDALE, N. Y.

MESSRS. MANN & MAC NEILLE, *ARCHITECTS*

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NO. 3. AN ENGLISH COTTAGE AT HARTSDALE, N. Y.

MESSRS. MANN & MAC NEILLE, *ARCHITECTS*

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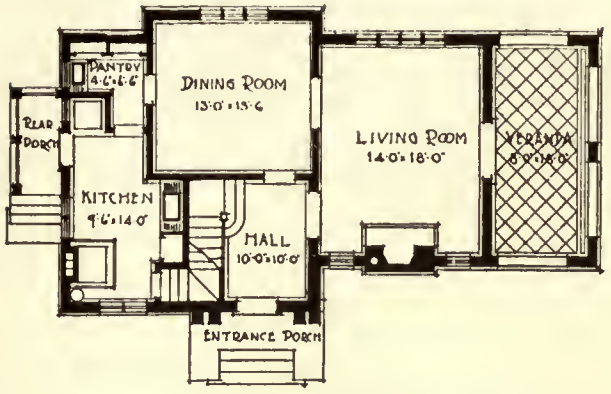

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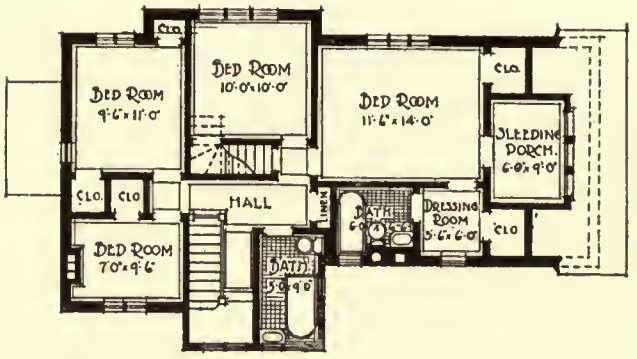
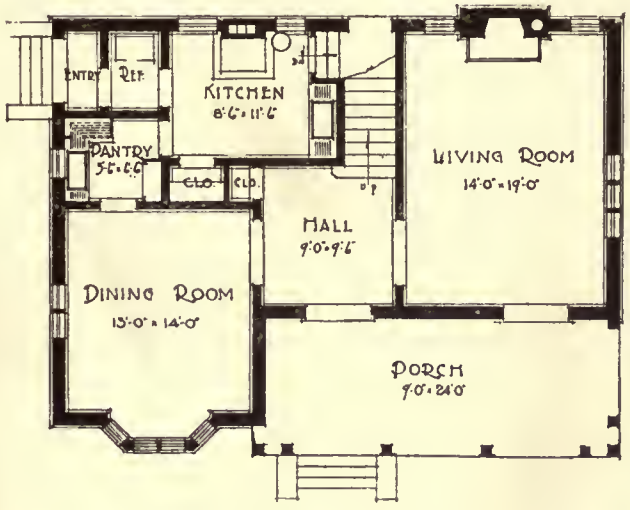


SECOND FLOOR PLAN

HOUSE NO. 1



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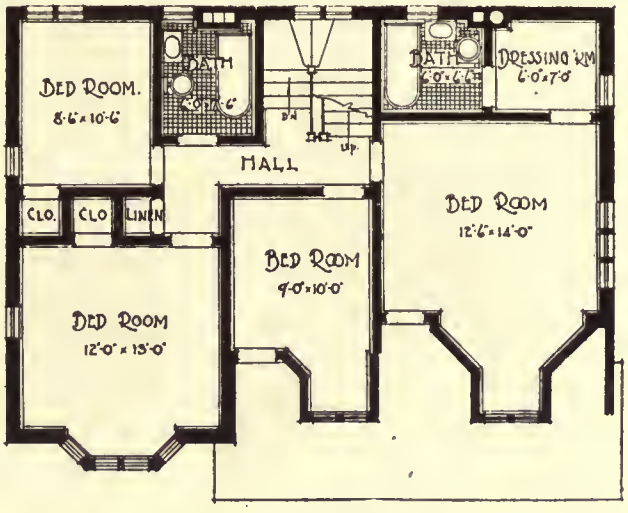
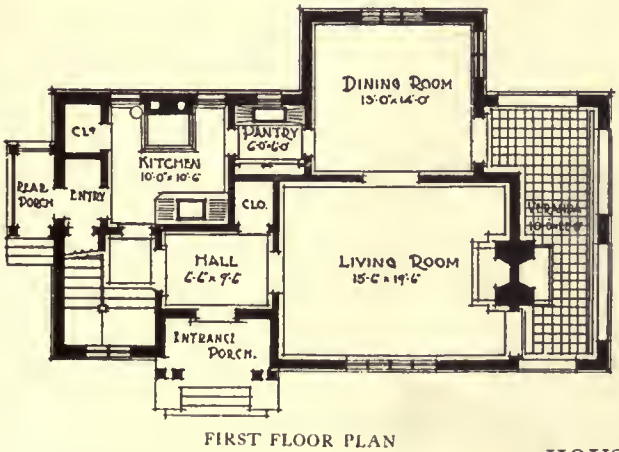


SECOND FLOOR PLAN

HOUSE NO. 2



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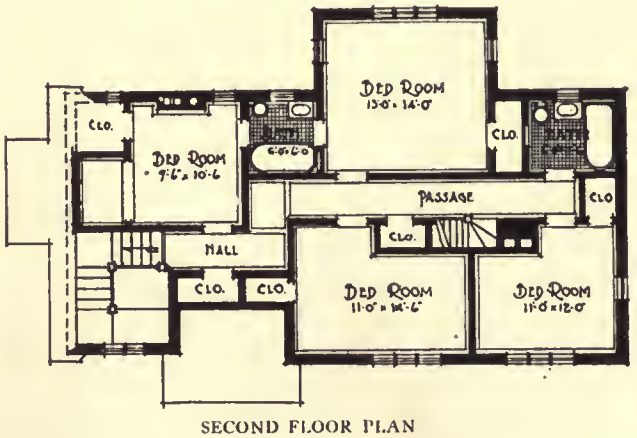


SECOND FLOOR PLAN

HOUSE NO. 3

ENGLISH COTTAGES AT HARTSDALE, N. Y.

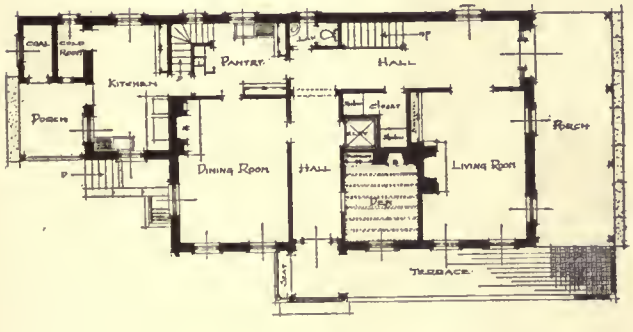
MESSRS. MANN & MAC NEILLE, *ARCHITECTS*

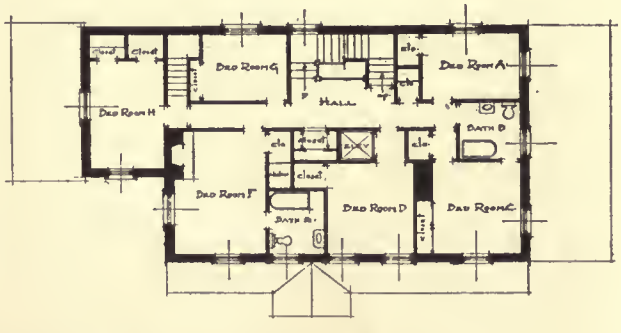
HOUSE OF MRS. M. E. WILLIAMSON, WEST CHESTER, PA.

MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*

THE AMERICAN ARCHITECT

VOL. CXI, NO. 2159 MAY 9, 1917





HOUSE OF MRS. M. E. WILLIAMSON, WEST CHESTER, PA.

MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*

DETAIL OF PORCH

HOUSE OF MRS. M. E. WILLIAMSON, WEST CHESTER, PA.

MESSRS. DUHRING, OKIE & ZIEGLER, *ARCHITECTS*

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VOL. CXI MAY 9, 1917 No. 2159

REPORT OF NEW YORK CHAPTER ON THE RIVERSIDE DRIVE PLAN

A REPORT made by Owen Brainerd and Egerton Swartwout, acting as a committee on Civic Improvement of the New York Chapter of the American Institute of Architects, has been presented, approved by the chapter and laid before the Board of Estimate.

After pointing out the objections to the scheme as at present proposed an alternative plan is outlined. It has remained for the New York Chapter to indicate the most serious objections to the Riverside Drive Plan and to present a substitute method that combines every feature of good engineering, conservation of all the esthetic resources and the prevention of chaotic conditions during a long period of construction such as has marked the building of the new subways.

The present plan, which contemplates the re-location of the tracks by moving to the east under the Park slope, is condemned, the reasons given that it will create a rigid and inartistic line of embankment impossible of proper planting under the proposed specifications, and in order to produce finally satisfactory result would compel the city to spend a further sum estimated at $250,000 to provide a necessary depth of soil.

The plan as proposed by the committee of the Chapter is one that would undoubtedly improve the condition of the park and reduce to the lowest minimum the period during which the people would be deprived of its usefulness. The solution offered is to be found in the principle of locating the tracks at the extreme outshore boundary of the park, making the westerly wall an architectural feature and placing a roadway and promenade on the roof. The first and perhaps most important advantage of such a plan is that it would greatly reduce the area of encroachment on the park. In fact, in some localities the park area would be measurably increased due to the location of track structure on land now under water or partially filled. This plan would utilize the entire shore front, whereas under the plan proposed by the city any utilization of the front would have to become a matter for later consideration at a very great cost.

Naturally, the possibilities afforded for a good architectural development of the park is one that would largely appeal to architects. In suggesting such a course no practical conditions have been overlooked, and one proposed by a body so competent to advise should not be lightly considered. In fact, so original and practical are the suggestions offered that we are hopeful they will influence a further careful consideration of this important subject, and that before the matter is finally closed we may learn that the beauty of Riverside Park is to be retained, and as far as possible enhanced in accordance with the chapter's recommendations.

THE THREE-STORY TENEMENT

WHILE those most closely associated with the Tenement House Law in New York City regarded its operation as indisputably good, they are further agreed it can with advantage be revised to benefit a certain class of property holders now suffering unreasonable hardships. The law as framed forbids the erection of tenements for three families, one to a story, without such methods of construction as

are needed for larger multi-family houses. This results in the building of the larger type of apartment house, and the three-family house has become non-existent. These conditions make for very undesirable congestion. To legislate against the construction of the small and comparatively cheap and sanitary tenements and to require the extremely costly construction of the large tenements would be productive of similar congestion and misuse wherever practised. The agitation toward the revision of the Code with reference to three-family houses arises from a condition more common perhaps in the Brooklyn district of Greater New York than in any other city in the country. The shifting of population incident to the construction of a large number of apartment houses and the changed character of building zones have resulted in a large number of three-story houses of excellent design and construction becoming vacant and therefore non-productive. As the law stands at present it is not permissible to reconvert these dwellings into three-family apartment houses, and it is proposed to secure such legislation as will enable owners of this type of buildings to secure an adequate income from their properties by conversion into three-family tenements. It is not contemplated in the amendment desired to the Code to lower the sanitary requirements of the tenement house laws in the reconstruction of these houses. The relaxation applies only to methods of sufficient sanitary requirements, the effect of which will be to lessen unsanitary habits.

WAR AND BUILDING CONSTRUCTION

THE question as to whether war will halt construction work has served to promote inquiry as to precedent, and present conditions, in order to evolve a possibly satisfactory answer.

Comparisons have been made between conditions existing to-day and the period just before the outbreak of the Spanish War. The consensus of opinion would appear to be that the present war will have little, if any, retardance on building operations.

The New York *Times* has made a careful review of the field of construction work, and among the views expressed and the facts set forth, the following is to be particularly noted:

It is stated:

"On April 23, 1898, just after Congress had affirmed that a state of war existed between this country and Spain, New York Stock Exchange prices held firm despite the fact that there was no such gold surplus to back up Government credit as exists to-day. At that date there was talk in Congress of creating a gold reserve of $300,000,000 to $400,000,000."

To-day, according to George E. Roberts of the National City Bank, there is approximately $2,250,000,000 in the Government Treasury, $450,000,000, including gold certificates, in the Federal Reserve Banks, and $460,000,000, including gold certificates, in the national banks, not to mention funds in State banks and trust companies.

In the readjustment of financial conditions, following our war with Spain, there was a very large impetus to building construction, and as far as the strength of the market for building materials may be considered, it was relatively the same as at the present time.

It is estimated that with the two hundred billion dollars of wealth of this country to-day our borrowing capacity would be at least $40,000,000,000.

These facts, known to well informed manufacturers, are the consideration that lead them to maintain present prices. Under such National financial strength construction will suffer no retardance and it is confidently predicted that the war, even if unduly prolonged, will not serve to affect the steady progress of building construction.

The Current Architectural Press

(*Continued from page* 292)

are illustrated in *The Architectural Forum* for March. These are excellent examples, both in plan and design. A further interesting feature is the illustration of an infirmary building at St. Paul's School, in Concord, N. H., by R. Clipston Sturgis.

In the text, H. D. Upton continues his

(*FROM THE ARCHITECTURAL FORUM*)

IROQUOIS CLUB, CAMBRIDGE, MASS.
WARREN & WETMORE, *ARCHITECTS*

series on The Adam Style, being in a sense a continuation of his review of a recent publication, The Work in Architecture of Robert and James Adam.

Some measured drawings and photographs of details of Italian renaissance architecture are shown, and there is also the first installment of a paper on Practical Perspective for office use.

* * *

The feature of architectural interest in *The International Studio* for April is the illustration and description of the Deshong Memorial Art Gallery at Chester, Pa., Clarence W. Brazer, architect. This issue is replete with timely articles on happenings in the field of art, and the reproduction of much interesting material.

(*FROM THE ARCHITECTURAL RECORD*)

HOUSE OF MRS. H. L. JUDD, MINNEAPOLIS
MARSHALL & FOX, *ARCHITECTS*

A G. A. R. Memorial Hall in Peoria, Ill., designed by Hewitt & Emerson, a somewhat unusual city church in Chicago, John A. Nyden, architect, a stone chapel in Detroit, by Alfred Kahn, and a number of suburban houses, set down in detail in the index to the current architectural press on another page, are shown in the March issue of *The Western Architect.*

(*FROM THE ARCHITECTURAL FORUM*)

DETAIL OF ENTRANCE FRONT
KITCHI GAMMI CLUB, DULUTH, MINN.
CRAM, GOODHUE & FERGUSON, *ARCHITECTS*
New York Office

In the text an article by H. D. Belcher discusses in an interesting manner the adapting of architectural style to the needs of a locality.

* * *

Good Furniture for April directs attention to the proceedings of a convention recently held in New York by the Allied Home Furnishing Industries.

The object of that gathering was to provide a plan, as fundamentally sound as possible, of educating the public to a higher appreciation of the artistic furnishing of the house. That such a propaganda can be very well advanced by those engaged in the arts of the craftsman is undoubtedly true, and it is equally true that its greatest success will be secured when undertaken by a group of men who combine the unfortunately rare combination of sound craftsmanship and thorough artistic training.

(*FROM THE ARCHITECTURAL RECORD*)

ENTRANCE TO RAILWAY STATION, MANILA

Mr. Richard F. Bach contributes an article on Art and the People. Mr. Bach expresses the belief that there is not the correct harmony between art and the people, particularly in the field of the industrial arts.

(*FROM GOOD FURNITURE*)

A SIXTEENTH CENTURY FRAME

George Leland Hunter writes on laces and William Laurel Harris presents an interesting study of the field of early Spanish art.

The series of plates, grouped in the section Art in the Home, are, as usual, well selected and have large suggestive value.

Proceedings of Fifth Annual Conference, National Housing Association

With each succeeding year the meetings of the National Conference on Housing take on added value.

Topics that at the inception of this housing movement were dealt with solely on a theoretical basis, for want of a practical example, have now become demonstrable by actual performance.

In addition, the great importance of housing problems is beginning to be realized, and men of wide practical experience have joined in a movement that is accomplishing tangible results.

The fifth conference on Housing was held in Providence in October, 1916. The papers read on that occasion and the various discussions were all very valuable contributions to this important subject.

Some of these papers have been published in THE AMERICAN ARCHITECT, and now, to make a useful reference volume, all have been grouped into one book and published by the National Housing Association, 105 E. 22d Street, New York. The price of the book is $2.00 postpaid.

A Recent Legal Decision

THOUGH AN EMPLOYEE CONSIDERS A PLANK INSECURE AS A PLATFORM TO WORK UPON, EMPLOYER IS LIABLE FOR DAMAGES FOR INJURIES EMPLOYEE SUSTAINS IN DOING NECESSARY WORK, WHEN NO MORE SECURE PLATFORM IS PROVIDED.—Morey *v.* Lehigh Valley Railroad Company, 162 N. Y. S., 434. Supreme Court of New York.

This was an action for injuries to a carpenter while he was attempting to complete the ceiling of a railroad depot, where it was necessary to use a scaffolding, and the carpenter found, when he went to work, a plank in the place intended to be used as a scaffolding, which he strengthened by putting a prop under the middle of it. It was a question for the jury whether the plank was furnished as a platform on which to work, and whether plaintiff's act rendered it unsafe, so that it was improper to grant a non-suit.

Evidently the horizontal plank was furnished by the company as a platform. The work upon the ceiling could not be done without the use of a platform. Those who had worked upon the ceiling before the plaintiff came evidently considered this plank as the platform furnished them. There is no suggestion that any other platform was furnished. The fact that the plaintiff and his fellow workmen, when they were required to finish the work upon the ceiling, thought that the platform was not entirely secure, and put a perpendicular plank under it to prevent it from sagging, does not relieve the defendant from the duty of furnishing a suitable platform. Of course, if the platform was sufficient aside from the upright plank, and they rendered it insecure by attempting to fix it, the plaintiff should not recover. It is difficult to see how the upright plank could act as a pivot, and make the platform more insecure than it was before. It was a fair question of fact for the jury to determine whether the plank was furnished as a platform, and whether the plaintiff and his companion, by tampering with it, rendered it insecure and unsafe.

The order and judgment should be reversed, and a new trial granted, with costs to appellant to abide the event.

Personals

Mr. Albert S. Gottlieb, architect, removed his offices from 303 Fifth Avenue to the Architects' Building, 101 Park Avenue, New York City, on May 1, 1917.

Mr. William Andrew Kidd, architect, has removed his offices from the Chamber of Commerce Building to Delaware Court, 250 Delaware Avenue, Buffalo, N. Y.

Mr. George D. Hulburt, architect and engineer, has moved his office from 320 Broadway Market Building, Detroit, Mich., to 207 Citizens Savings Bank Building, Owosso, Mich.

Messrs. Charles H. Bebb and Carl F. Gould, architects, announce that they have removed their offices for the general practice of architecture to Suite 1005, Securities Building, Seattle, Wash.

BOOK NOTE

JOSEPH PENNELL'S PICTURES OF WAR WORK IN ENGLAND. Full cloth, fifty-one illustrations and an introduction by H. G. Wells. Philadelphia, J. B. Lippincott Co.; London, William Heinemann.

This series of pictures has not been made on battle fields, nor in the nearby area that marks the progress of the great struggle. There are no sketches of ruined villages, of the desolation of battle fields or of the attendant horrors. They are all made, far from the scenes of strife and bloodshed, in those industrial centers where, as if in a night, huge works have sprung up, and where thousands of men and women are employed throughout the twenty-four hours of each day in the making of ordnance and all the munitions of war necessary to the effective operations of an immense army in the field.

There are probably two men to-day, more than any other, qualified to undertake such a work as is represented by this book, Pennell and Brangwyn. And, as Pennell was the first and most insistent of the two to point out the vast pictorial possibilities of work, or labor, it is fitting that to his hands should be intrusted a task so important.

During the many years that Pennell has roamed over Europe, pencil in hand, producing those delightful "bits," that are so simple in structure, but that so completely tell their story, he has acquired a power of observation, a facility for analysis and a discriminative sense that has made his work unusual. All these things he appears to have grouped in these sketches of war work.

The same virility that characterized his pictures of the Panama Canal under construction, are seen in these sketches of war work, with the added interest that attaches to everything connected with this great struggle.

Mr. H. G. Wells, in his introduction, states: "He (Pennell) sees these forges, workshops, cranes and the like as inhuman and as wonderful as cliffs, or great caves, or icebergs, or the stars. They are a new aspect of the same logic of physical necessity that made all older things, and he seizes on the majesty and beauty of their dimensions with entire impartiality."

Mr. Wells has exactly stated the unusual character that attaches to these sketches, "a new aspect of the same logic of physical necessity."

In the ability to see things "different" lies the true secret of what we call originality. There is a tendency to travel well-beaten paths, and when we reach the vista we only observe it from the same viewpoint as those that have preceded us. When men in any walk of life are bold enough to slip aside from the usual method of approach to a subject and view it from a different angle, if their previous education has been one to sharpen their faculties, we may look for a new and perhaps more forceful interpretation.

In any event, Pennell has not traveled the "beaten path" and what he has set down in these sketches of war work is a further revelation of the great pictorial possibilities of work in all of its phases.

Photographs at the Royal Academy Exhibitions

Photographs, which have heretofore been barred from exhibition in the architectural section of the Royal Academy exhibitions in London, will this year, owing to a special regulation, be admitted. Certain restrictions will prevent the too profuse representation of any one subject or the hanging of a photograph smaller than 8 x 12 inches.

The Architects' and Builders' Journal says: "Its effect must be to give specific character to a section of the exhibition that has languished because its object has been misunderstood by the general public and seems indeed to have been seriously misconceived, or but dimly discerned, by the majority of the hanging committee. Certainly it should have been always perfectly obvious that the primary object of an architectural section was not the making of pictures, but the representation of architecture. . . . Skill in painting or drawing does not necessarily coincide with meritorious architectural design,

and it follows that while probably much good work has been rejected for feebleness in the delineation, much possessing but little architectural merit has been accepted on its sheer pictorial value. . . . Many excellent architects have neither the time nor the inclination to achieve Academy standard in graphic illustration of the buildings which are, after all, the architect's true medium of expression. That this admission of the camera will greatly discourage draughtsmanship we do not believe, for the artistic *projet* has a distinctive value that is clearly recognized and cannot be superseded."

The R. I. B. A. Gold Medal

The Royal Institute of British Architects Gold Medal for distinction in Architecture will be awarded this year for the second time in its history to a Frenchman. M. Paul Henri Nenot, who has been selected for the honor, is 64 years old. He is a member of the French Institute and for some years has been in charge of all France's national palaces and civil buildings. His work is to be seen in most important French towns, and his most important architectural task was the remodeling of the Sorbonne.

An English Editor's Struggle with an American Idiom

The editor of *The Architects' and Builders' Journal* of London, commenting on an article in a recent issue of *The Journal of the A. I. A.*, amusingly states:

"It is an American poet who sings, 'And things are not what they seem.' For example, 'pork' is something else. What pork is when it is not pork one can only guess. Many references to it are cited from the public press in *The Journal of the American Institute of Architects*, which we welcome monthly not from Chicago (which, we understand, has the unholy alias of 'Porkopolis'), but from Washington, D. C. Thus we learn with respect to an 'Omnibus Public-Buildings Bill' that there was a 'pork-barrel combination back of the Bill'; that 'friends of pork cry that Congress will never surrender its right to appropriate public money for public buildings'; that 'pork has not been propitious to architecture'; that 'the Government ought to lead, but it does not —and pork is one of the reasons.' We must confess that we find these porcine allusions somewhat baffling. They seem to make pork, or the friends of pork, at once beatific to building and inimical to architecture. Is this what is meant by a 'pork-barrel combination'? It is not a rare phenomenon, this of the ardent builder who 'makes pork' of the architecture; but our own familiar idiom does not illuminate the American use. We suspect—but this is mere guesswork—that the 'friends of pork' are Congressmen who like to go back to their constituents with tangible and porcine proofs that local interests have not been neglected—perhaps they come off with Government grants for local buildings; but why a predilection for pork should be deemed unpropitious to architecture (except on some theory of nightmare design), or why pork *per se* should be a reason why the Government does not lead (unless it be that lethargy supervenes on pork-provoked dyspepsia), are esoteric mysteries with which the stranger intermeddleth not."

Highest Chimney in the World

It is stated in a recent issue of *Engineering News-Record*, that the highest chimney in the world was completed last January in Saganoseki, Japan. It is of reinforced concrete construction, 570 ft. high, 42 ft. 8 in. outside diameter at the bottom and 26 ft. 3 in. inside diameter at the top, with a thickness of 29½ in. at the bottom and 7 in. at the top.

The design includes provision for earthquake stresses, which were, it is stated, checked and approved by the Imperial University of Tokyo.

INDUSTRIAL INFORMATION

Badger Quality

E. B. Badger & Sons Company, 75 Hicks Street, Boston, Mass., has issued Catalog F, describing Badger Copper Boilers and Metal Pantry Sinks. Particular emphasis is placed on Badger Quality. The constantly growing tendency on the part of architects to look beyond the first cost of an article and to consider rather its ultimate value has, it is claimed, been the direct cause of the growth and prosperity of this business. It is further stated that architects who know of Badger Quality specify Badger boilers or sinks under usual conditions, and eliminate all indefinite or equivocal clauses such as "or equal," from their specifications.

Catalog contains a boiler specification, which is presented as one that will insure a satisfactory result if carefully followed. Badger pantry sinks in various styles and sizes are shown, and a number of pages are devoted to illustrations of some of the most noted residence, hotel and institutional buildings recently erected in which Badger goods have been installed.

Catalog mentioned will be sent upon application.

National Boilers

The National Radiator Company, with general offices at Johnstown, Pa., has issued Catalog 21, describing the National Novus Boiler, designed for all forms of steam and hot water heating, but especially adapted for small buildings and residences. It is said that before announcing the National Novus Boiler, several years ago, it was given daily tests of unusual severity over a period of two years. These were made accurately and conscientiously by men of long experience and the final form of the boiler was determined as a result of them. Master patterns were then made of solid brass instead of wood for every part of the National Novus boiler. This, it is stated, permanently insures accuracy. Old methods and standards were discarded and new ones adopted. The firepot was made in three sections instead of one, requiring only one man to handle and erect it. Instead of employing a fictitious rating this boiler was rated according to evaporative tests. These tests covered periods of eight hours on one charge of fuel. List prices, ratings and measurements are tabulated in a manner that enables the user to select the type of equipment required for any special service.

Copy of the catalog will be sent to architects upon application.

Alpha Cement

The Alpha Portland Cement Company, with general offices in Easton, Pa., has recently issued a revised edition of their book, "Alpha Cement—How to Use It." As indicated by the title, this book describes in great detail Alpha cement—its manufacture and use. Included are numerous examples in the form of engineering works and buildings. It also presents a number of plans of houses, garages, farm buildings and other structures which are designed particularly for construction in cement, stucco or of concrete with stucco faces.

These plans are given in greater detail than is usual in works of this kind, with the result that they seem to possess unusual practical value. In the case of each type of construction illustrated, full descriptions and details are given. Photographs of the completed works are also shown which enable the reader to judge of final results.

Architects or builders interested may secure copy of this book by addressing the company.

PALAZZO FIBBIA, BOLOGNA, ITALY

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MEMORIAL WINDOWS: AN ANALYSIS

By CLEMENT HEATON

AN architect writing on stained glass rightly maintains that it is necessary to enhance architectural effect; a glass painter, who understands his art, will appreciate this, and agree with the demand. But there is need to deal with this subject from another point of view, seeing that the art of any epoch is a resultant of many complex forces, and does not depend wholly on the artist.

The artists of Egypt, Assyria, Greece or Rome, approached their work with broadly differing conceptions, due to their surroundings. The medieval artist conceived things in a still more different way, and again in the full grown Renaissance, the artist had another viewpoint.

ANOTHER OF THE WINDOWS OF ST. REMI

Now artists in the nineteenth century have also had to work under the influence of their time and place, and it was so for him who worked in glass, as much as in other materials. The general trend of taste, at any time, may be such as to oblige an artist to do things in a certain way, even if he were not so inclined; but also his own ideal is shaped by education he receives in youth, and by the literature and criticisms he afterwards meets. These factors should be recognized in discussing results generally seen, and any discussion of memorial windows can only be complete from this point of view.

The fact that in our time stained glass is used principally as a medium for "memorials" is due to an evolution in art. medieval glass was not so made use of till late in date, but was regarded as a part of necessary decoration. Sculpture was used in the Eighteenth Century as the vehicle of memorials, as one sees it in Westminster Abbey, and in the Nineteenth Century glass painting took the place of sculpture for memorials. Thus arose the "memorial windows."

Churches are now built empty of colored glass and are filled bit by bit, as windows are put up for memorials, and this leads to churches remaining in a half-fledged condition for many years; when they are at last filled, what has been done is seen to be incoherent. This is naturally the case, and is due to the conflict of so

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many independent units, each inserted with no relation to the whole. That this is deplorable is only too evident, but it is the way of dealing with decoration that is at fault, and governs both the stained glass and its authors.

A single window is often asked for, and directions are given as to the form it is to take; any criticism of the artist from the viewpoint of the effect on the whole building would almost be looked upon as impertinence. In the public conscience no idea exists, so far, of the value of a complete scheme in decoration, indeed the idea of decorating a building in color has been so wholly lost, it now seldom occurs to anyone as an aim to be pursued, much less an obligation. Hence modern church interiors, like modern cities, are made up of heterogeneous elements.

It used not to be so, as our modern practice arises out of the Eighteenth Century. From the time of Charlemagne, for many centuries, it was regarded a matter of course that a church building should be completed with color decoration. It is clear from an existing writing of the Twelfth Century that stained glass was then regarded as a part of the general color decoration on walls and roofs. But this ideal has been lost, the esthetic completion of a building is now neglected. When some donor then comes along with an offer to deal with an isolated spot, he considers himself free to have it done as he likes, not as the building really requires. So "handsome windows" of all sorts and sizes are "dumped" alongside one another, each one being considered as a separate picture. Indeed it is not uncommon for the donor to give a photo of a picture to the glass painter, as an indication of what is wanted.

PART OF THE GLASS AT ST. REMI DE RHEIMS. LATE TWELFTH CENTURY, NOW DESTROYED

The universal experience of seeing pic-

tures of all sorts hung side by side in picture galleries has destroyed the architectural idea of art as forming a coherent whole, and the aspect of collections of unrelated pictures is now so familiar that this treatment of church windows is accepted with perfect complacence. This is so almost as much in England and on the Continent as it is in America. It is for the architect to use his influence to help matters, in demanding a wiser treatment. We can already see that glass painting is now being directed in a different way to what it used to be, as the result of wiser criticism.

NAVE, STRASBOURG CATHEDRAL SHOWING FOURTEENTH CENTURY WINDOWS
Designed on a Decorative Basis. The Figures Are in Some Cases Much Earlier

We can now consider the treatment of the glass itself. It is admittedly the fact that modern stained glass is very different

INTERIOR OF THE CHURCH OF ST. REMI AT RHEIMS, NOW DESTROYED

The Twelfth Century Glass Filled the Windows of the Apse, and Though Not of Great Interest in Itself, Had a Very Beautiful Effect on the Building. None Were Put Up as Memorials but the Whole Were Treated as Decoration.

from medieval glass. This is true not only in the case of the "pictorial" window, but even with regard to the would-be medieval window now coming into use.

The modern pictorial window is the result of the habit of mind engendered in public and artist alike, by a long evolution, culminating in the exhibition of pictures. This has been going on for so long, and the public mind is so saturated with it, that a medieval treatment of art now appears peculiar or "archaic," and is not appreciated. In sculpture, mural painting and stained glass, an ever present desire for the *imitation of nature* has held sway. The beauty of ornamental *design* and need for decorative quality are ignored.

But how different was the atmosphere in medieval days. From the South, the East and the North came the same decorative impulsion and there was no such thing as imitative art; and no one had any idea of its existence. Ideas were suggested by a series of well-understood abstractions, and everything went to make a decorative whole. But he who would to-day insist on this ideal is looked upon as an archeological plagiarist, though he may be convinced of the necessity of so working, as the only right course to pursue, and however original his design may be.

Hence it is not true to-day that if a man is a "real artist" he will do what is right in stained glass. He may be really a good artist in the modern sense, and yet not do so. John Lafarge was an artist to the backbone, but his mind was directed by ideals evolved in modern art, so he aimed at realizing them in stained glass. Ignoring all the precedent of medieval practice, he instituted a method of working which enabled him to get pictures in glass. From this source has spread a tradition which has pervaded the whole of America, in which opalescent white and colored glass is used with as little pigment as possible. It is now well understood how this came about and the ideal is being abandoned.

In England painters have essayed to do work in glass, and there they have utilized the medieval technique, but they have rarely been able to shake off the habit of mind engendered by years of early training, based on close imitation of nature. Rather than doing glass, as one painter put it, "It did for them." In France, notwithstanding the fact so many noble ancient examples exist, cathedrals and churches have been treated with transpar-

ent pictures in the form of windows, a form of art out of place in the ancient buildings in which they are placed. All this is the result of the modern atmosphere pervaded by pictorial art.

WINDOW, TRINITY CATHEDRAL, CLEVELAND, OHIO

Designed and Executed by Clement Heaton. Great Care Was Taken to Attain Decorative Fitness

Now to get to anything like the glory of medieval glass, a glass painter has had to go against the dead weight of all this influence. To attain any such result, as the ancient glass, not only must the design be made by an artist, but by one who is a master of his special craft, and that by being a craftsman of it himself. It ought to be considered as a matter of course that no glass be produced without an artist, though in the present state of things a commercial order is filled without any such consideration.

This mastery can only exist where a full and conscientious study has been made of the question. As an architect is not considered equipped for dealing with his art, if he has not made acquaintance with the history and examples of ancient architecture, so a close knowledge of ancient glass is as necessary for a glass painter, if he would aim at anything like the mastery of ancient works. There must be, as well, the actual experience of working in the material, and all that goes to make an artist in a general way besides. Mere archeology and craftsmanship do not give art.

But what inducement is there to undertake such a costly study? Glass painting is to-day scarcely considered an art by the public, and is commercially and industrially exploited.

There are no possibly large prizes to be hoped for, and experience shows that the aim of fine decoration is little appreciated, even when the proposal is made to give it.

The fact that it is not unusual for a photo of a picture to be given of a suggestion of what is wanted by the donors of a window explains much.

Were the educated public wholly ignorant of art they would not of course do this, but where there is a familiarity with picture galleries abroad, the conclusion has been drawn that as these are shrines of art, art of a pictorial character is good for use everywhere. It is not understood that architecture is a structural art, enhanced by beauty of design, that sculpture, stained glass or mosaic work should be designed in such a way as to enhance the building.

So even a committee "made up of people who know" is therefore as liable to do as much harm as good, as long as their knowledge is confined to pictorial art. The question of medieval design is, as a rule, too little a part of education, and a committee is not likely to be formed of those acquainted with this subject. So it happens naturally that where a decoratively

designed window is submitted to a committee for a preliminary examination from this point of view, it should be met by some such remark as was once made by one who said he wanted "to see the finger nails." How is it possible with such a disposition to discuss a scheme of architectural decoration?

There is need therefore to insist on the fact that, owing to the general trend of public opinion, formed by a secular evolution of thought in Europe, a wrong ideal has been held up and acted upon generally. This particularly in America, where the pictorial idea had had full sway, owing to the absence of medieval examples of architecture which to some extent held it in check in Europe. This being the case, it was not possible for anything else to happen than what we see, and no one class only is responsible for the result; it is due to a general cause and until the general ideal changes we can only begin to consider in detail what should be done to realize a new aim.

"A thing of beauty is a joy forever." Of such joy the world stands in need. As long as colored windows are a kind of glorified tombstone put up for a private memorial, or are considered as "church furniture," we shall not get the glory of color and design which this magnificent art is capable of rendering. Art of this kind cannot be held as secondary to its usefulness for some reason, and if it is "the thing of beauty" is not attained.

When charm of color is seen to be a great element in life, one that it is worth seeking for for its own sake; when the proper adornment of a building is seen to be as necessary to a congregation as the proper clothing is to an individual, the art of glass painting will be properly dealt with.

There is no doubt the old pictorial view is going fast, and among a few a new interest in medieval art is opening new possibilities. The future is all for a better treatment of glass. As this is accentuated by time the present commercial production, even of medieval types, will be seen to be but a spurious imitation of the real thing.

French Supplies of Reconstruction Materials

In a recent issue of Commerce Reports, issued by the Department of Commerce, Washington, D. C., it is stated:—

"The French Minister of the Interior has just published the results of an investigation made under his direction concerning the supplies of building materials likely to be available for reconstruction work in France upon the conclusion of the war. Among the materials thought to be available in sufficient quantities are stone, brick, sand, cement, tile, building hardware, wall paper, and certain others of minor importance. It is believed that for lime, iron pipe, street-paving materials and sandstone French production may be increased to a point that will meet the demands. In the groups of materials in which a shortage may be felt are plaster, timber and lumber, slate, structural iron and steel, heavy hardware, tin, zinc, lead, plumbing supplies, pumps, sanitary appliances, heating apparatus, paint and glass of all sorts.

"It is reported by the Government that the necessary steps will be taken promptly to encourage the larger production of those materials of which there will undoubtedly be a very considerable need as soon as building operations are resumed on a large scale. These measures consist mainly of: The provision of facilities for obtaining the necessary equipment for producing building material; the resumption of operations in plants that were shut down; the resumption of the exploitation of mines and quarries; the reopening and improved equipment of brickyards, tile works and establishments engaged in the manufacture of lime and cement and other basic building materials; finally the adoption of measures to increase the available supply of labor. It is, furthermore, stated by the Government that every effort will be made to have the work of reconstruction undertaken as far as possible by local concerns. It is of course generally understood that the Government will give financial assistance to all manner of reconstruction work in the devastated regions of France."

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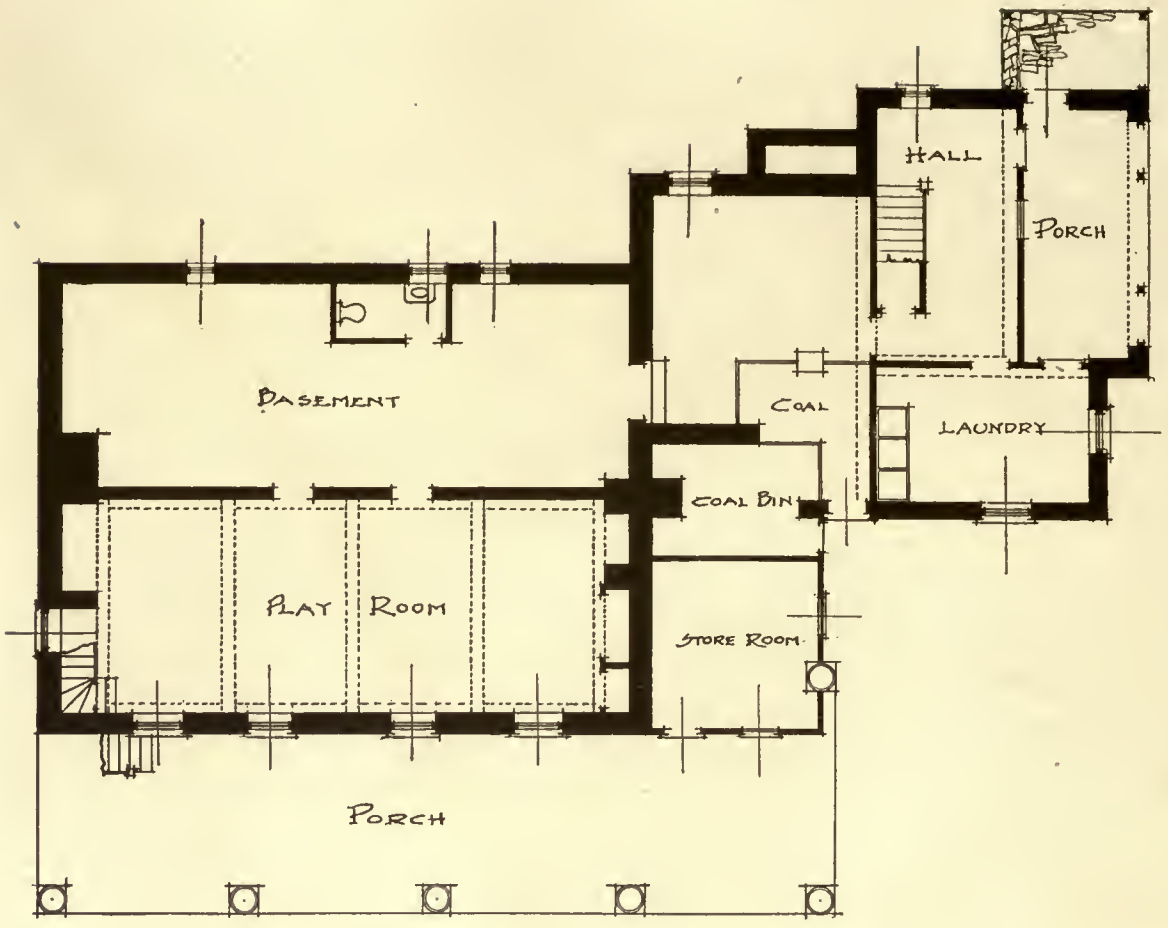

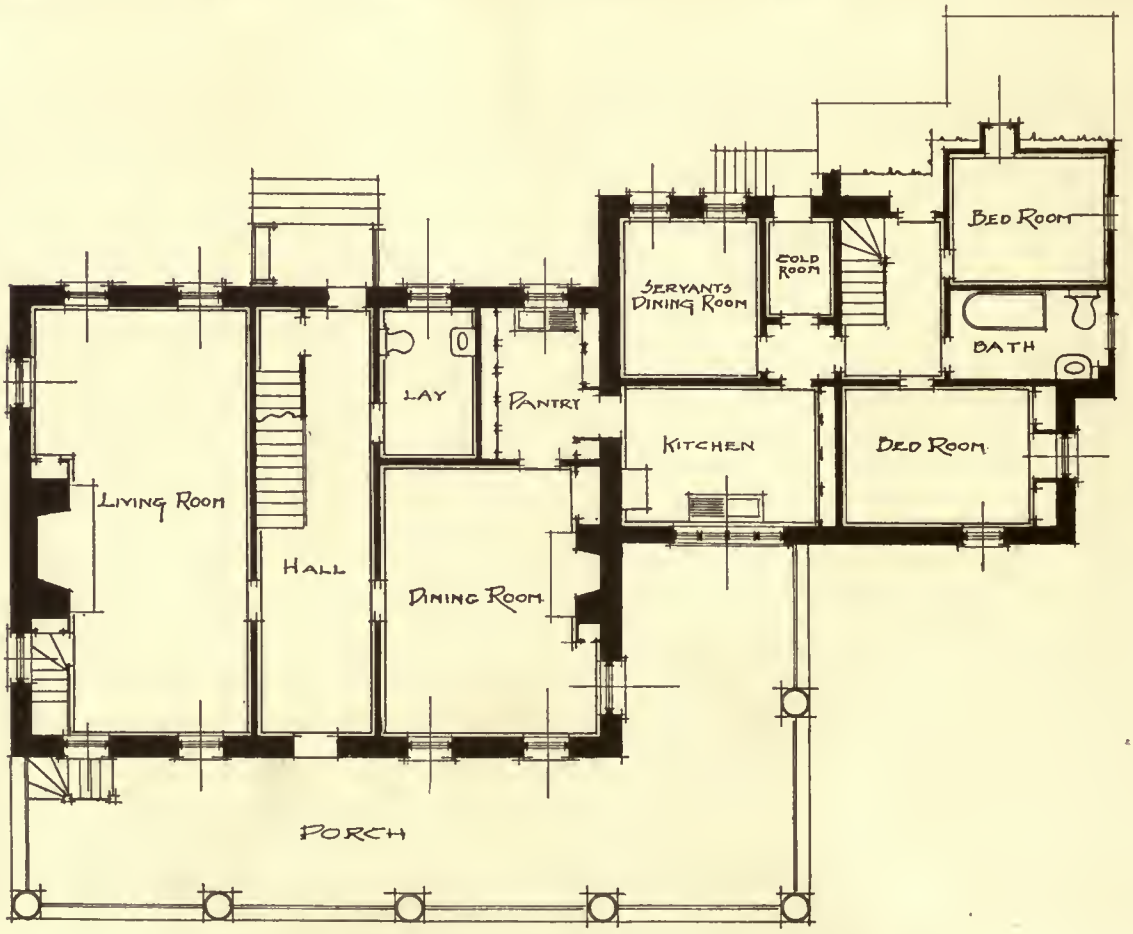

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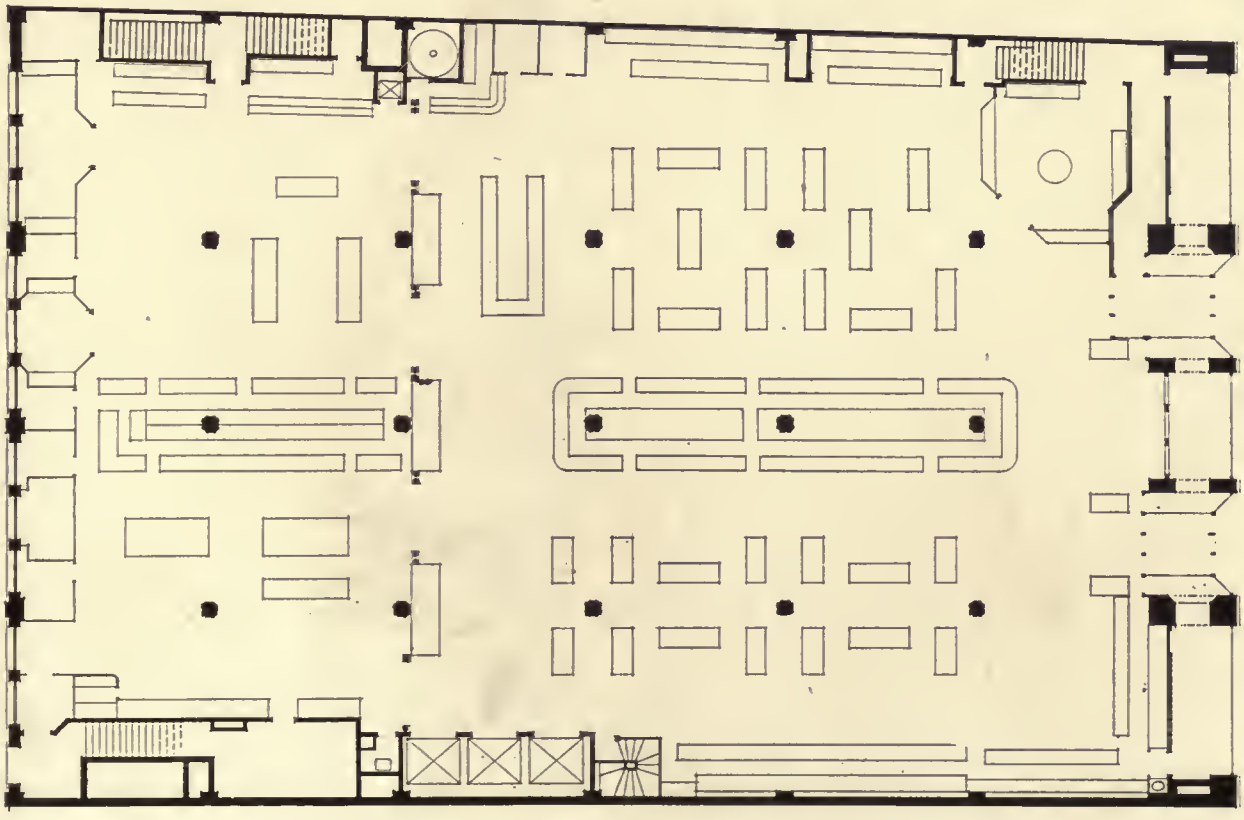

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WINDOW IN RESTAURANT

VIEW IN RESTAURANT

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ARTISTIC METHODS IN DESIGNING

THERE is an ever increasing interest among students in art as to the methods pursued by men who have achieved eminence in their profession, as designers. If you will follow the wanderings of an artist, who no matter how old in his profession is forever a student, about an exhibition, you will not fail to note that after having viewed a subject from a conventional distance, he will, to use the studio term at once "smell the canvas" or by very close and minute inspection, seek to learn the methods by which the result was obtained and if possible the material or surface on which the media had been applied.

Technique or a characteristic manner of expressing one's ideas is as varied in men as is their individual handwriting. It is the combination of these characteristics or temperamental peculiarities and the use of the various media employed that dominates the artistic result.

When a painter completes his picture, his work as far as that particular effort is concerned is finished. There is no further extension of the idea to a more tangible production. When an architect has completed his rendering, it is but the first of a long series of steps toward a very material result that may or may not "work out" in the way intended, but it is in this first freely executed sketch that he puts the enduring qualities of form, texture and often color that stamp the building as a work of excellence and as an artistic creation.

To those who know the mental phases of the birth and development of a work in architecture, these preliminary sketches have an interest that cannot be understood by the laymen. A few lines hastily set down, often on any scrap of paper or material that is just at hand, may contain the germ of an idea that is the foundation of a successful design. To the man who made them, and the fortunate few who can understand them, they convey as insistently as if carried to the height of completion a certain ultimate result and suggest the three dimensions of length, breadth and thickness and often color.

These office studies and renderings made by clever designers are the admiration of their associates and inspire the client who often witnesses their creation in a moment of inspiration, with a sense of awe and deep respect for the completed results. It is not given to every man to do these things in this "hot off the bat" manner, as it is to the fewer and more fortunate men in the field of architectural design.

It is interesting to learn in one of a series of articles on Architectural Drawings and Office Studies just how certain men proceed to set down the ideas or inspirations that reach them. We find that no two men work along similar lines nor does any one man always pursue the same method. As the design grows under his hand the surface of the material on which he is working and even its color will suggest possible texture and color of the building.

For example, in one lot of drawings executed by Mr. Charles Z. Klauder and illustrated in a recent issue of *The Architectural Review* we learn that some of them are "the actual studies for the satisfactory expression of an architectural idea before it has been reduced to the formal state of working drawings." In others they are merely office sketches

often made to convey in a manner no words could do, the meaning of the men who have created the idea.

Some of these drawings have been done on "Whatman," some on ordinary wrapping paper, others on window shade material. The design has been the thing, and whether done in pencil, charcoal, water color or oil, what is set down counts and not the vehicle used.

It is this phase of the architect's work that stamps him as an artist and earns him the right to the title. Rarely does the client come in contact with it, and aside from the rendering he has little, if any, clear knowledge of the artistic beginning of a work in architecture, and only such presentation as has been simplified to meet his ability to understand.

There may perhaps come a day when architects will be able to lay aside the T-square and turn over to their builders the design for the façades of a building drawn in the freest way and with only the main dimensions marked. But that day is far distant, as it means the education of labor to a point of artistic perception only second to that possessed by the architect. When a building can be constructed, divested of the hard and fast restrictions of the T-square and rule, and workmen can be trusted to run courses of brick and stone without a fixed, unvarying unit to guide their work, then we shall realize the true art of the designer and our buildings will take on all the excellent qualities of the medieval structures that are to-day world models and which show exactly the results that the designers' artistic perception intended and in a greater degree than it is possible to produce by present arbitrary methods.

THE CONTROL OF STREET ARCHITECTURE

THE control of street architecture, or what has been aptly described as the conservation of our architectural resources in the development of a city's streets or civic centers, was the subject of discussion at an important meeting of the Royal Institute of Architects recently held in London.

It would appear that English property owners were inclined to act as independently as the same class in this country. The equally unfortunate results of incongruity and inartistic effects are becoming apparent in London, and so serious is this menace to the esthetic development of the city, that very careful attention is now being given to the search for some practical solution.

The subject of "control," it would appear is after all but the recognition of the fact that no citizen could be accorded liberty in the erection of his building, unless in the exercise of the privilege, he proceeded in a manner that did not interfere with a similar enjoyment on the part of his neighbors, or one that did not give offense by the inartistic motive of the design.

Where a town or city has a general "plan of improvement," and this plan becomes a part of the code, the physical aspect of structures are, of course, more or less under control. But, the feature not so easily controlled is the esthetic development of a certain locality and the prevention of those incongruities of design that so seriously affect the general impression of a city's thoroughfares.

A favorite example, referred to at the meeting in London, is the gradual change that is taking place in the "classic precinct" of Regent Street. The "alterations" that have been made in the past and that are contemplated in the future, are likely to destroy the architectural integrity of a section famous for its beauty. There are other sections in London also threatened, while in this country, particularly in New York City, there are locations that offered a most unusual opportunity for good architectural development now practically architecturally ruined. Much has been written in criticism, protest has been made but no results achieved in the direction of preventing the wasting of an architectural resource.

FOUNTAIN HOUSE

Handmade Tile Roof. Limestone Cornice. Columns, Trimmings, Base, Stylobate and Walls, Stucco With Inlay of Buff Brick. Wood Lattice

GARDEN FOR MRS. ELBRIDGE R. JOHNSON MERION, PA.

WALTER T. KARCHER & LIVINGSTON SMITH, *Architects*

THIS garden adjoins the lawn of an estate near Philadelphia, and it might be of interest to note that the photographs here shown represent its aspect fourteen months after the site was a vacant plot; not all this time was required for building—it embraces the building and all the garden planting. A fine old stucco wall with a great screen of poplars behind, and a little tea house at its center, formed the rear boundary of the original plot, while the side boundaries were established by six foot hedges of privet. Such fixed the parti. Although there existed a front boundary of privet, this, together with a little cast-iron fountain, were disregarded. This is hardly true, however, in regard to the little iron fountain, for it did serve a use in being elaborated into a stone basin carrying an ornamental vase from which now rises a little musical jet. It has in fact become the real head of the composition, for about it was constructed the tile paved and brick walled shelter, the real entrance to the garden; and from which by way of the pergola one reaches the original tea house at the rear garden wall. Halfway on the journey between these two shelters is another shelter, arched and covered, which marks the starting of cross paths to the seats at each of the side privet hedges. The views and composition of the garden were studied with relation to these seats.

The old garden planners had the right theory in regard to making the interested ones investigate, but for those who did not care, or would not devote the time, there was little to be seen. In our later times we too often adopt the theory that gardens are like newspapers, where a few headlines of predigested news is sufficient for the busy man.

Here the architects worked on the former theory, and succeeded in breaking up the Garden into many views and groupings so well that one cannot get a

A SEAT IN THE GARDEN

VIEW OF ONE-HALF OF GARDEN

GARDEN OF MRS. ELBRIDGE R. JOHNSON, MERION, PA.

MESSRS. WALTER T. KARCHER AND LIVINGSTON SMITH, *ARCHITECTS*

VIEW THROUGH CENTRAL SHELTER LOOKING TOWARD TEA HOUSE

comprehensive photograph. The purpose was to prevent it being "seen at a glance."

The fountain house, on this theory, was made to invite, but not disclose. As it is seen from within and without the enclosure, it is further elaborated than anything else. Its limestone columns and trimmings tone well with the warm tan of the stucco piers, while with this is contrasted the brilliant many-colored tile of the frieze, and the various reds of the hand-made tiles of the roof.

The pergola columns are stucco on concrete. Between them, except where paths start off into the garden, are box hedges. In the garden box bushes, biotas, and flowering peach, cherry, plum, apple and magnolia trees form points in the composition, while box hedges and vari-colored plants border the grass paths.

One great value of any garden is its ever-changing aspect, either through the hours of the same day, or through the different seasons, and another value is the feeling it engenders that it is never completely finished, but that it always offers an opportunity to add some new feature, a bird bath, a vase or a statuette.

In this case the planting is so arranged that each month's bloom is harmoniously designed and differs from the others in color scheme and composition.

INTERIOR OF FOUNTAIN HOUSE

Tile Floor, Tapestry Brick Walls, Wood Lattice, Limestone Monolithic Fountain Basin, Plaster Ceiling, Chestnut Beams

Adjacent Towns and Cities Should Plan Together for Development

At the recent conference on city planning in the metropolitan district of New York, George B. Ford, of New York City, read a paper which contained a discussion of co-operative city and town planning. The gist of that discussion follows:

No growing town can afford to stop planning at its corporate limits, for, just outside those limits, streets are being laid out and buildings erected contrary to the city's interests. A little co-operative planning now would save the spending of vast sums of money later to correct the troubles.

In the New York metropolitan area, where there are so many cities and towns close together, often bordering on each other, everyone that has done any constructive planning realizes how difficult it is to size up the trend of future growth in his town, unless he knows how the neighboring towns are going to be planned. A comparatively small change in almost any phase of the planning of the next town may easily make a serious difference in the case of his town.

It makes considerable difference where main traffic thoroughfares or electric cars enter a town; in fact the thoroughfare system of the town and the layout of the street car system is quite dependent on them. If one town succeeds in relocating or depressing or elevating a railroad, the adjacent towns have to plan to conform. If a railroad station is located near the border of a town, the nearby streets and car lines in the next town are altered to fit. A good park on the edge of one community has a strong influence on the park situation of the adjacent community. Bad housing "just over the line" brings up serious planning problems. Different planning laws and restrictions in towns which border on one another give rise to all sorts of complications and unfairness. Of two towns, side by side, where one is conscientiously interested in the appearance of its streets and buildings and the other is not, the latter soon finds itself at a considerable disadvantage. Everything is to be gained by co-operation in planning. Waste is bound to ensue without it.

Newark, N. J., after four years of struggle with her plans came to realize so strongly the necessity of co-operative effort that she organized a "Conference of Interurban Improvement" and every week or so the city engineers or other representatives of some eighteen neighboring towns came together to discuss frankly their common problems. This "clearing house" has been of the greatest value. It has not only served to settle difficulties arising where towns touched one another, but has made it feasible to work out comprehensive plans for the development of the whole Newark metropolitan area. More than that, it has served to arouse from their lethargy the more backward towns and all have had an opportunity to become familiar with the best planning practice.

The Massachusetts Federation of Planning Boards in which the 56 planning commissions of the state have joined is serving as a splendid medium for education and has further great possibilities for effecting state-wide planning. The same is true of the Pennsylvania, California and Texas planning conferences and the City Planning Committee of the New York State Conferences of Mayors. They prove decidedly the value of co-operative endeavor.

London and Berlin have brought together the neighboring towns for comprehensive city planning. I saw recently in London comprehensive plans for the whole metropolitan area, some two thousand square miles. They have found that satisfactory planning can be done only where all the communities affected unite in the study of their common problems.

France is now passing a law which will make planning commissions compulsory not only in every city and town but will create one for every state (departments, as they are called there), and a general commission for the nation. They are doing this as a matter of "Preparedness for Peace."

The organization of the Westchester County Planning Commission is one of the most significant movements in this direction. It is the forerunner of the county or state commissions that are bound to be recognized throughout Amer-

ica in the near future as a necessity. It is most important as a medium for securing unity of thought and action in planning a region full of unorganized cities, towns and farming communities in the greatest variety. Without a general body such as this, planning within Westchester County would, at best, be chaotic. It is most fitting that the idea of city planning co-operation among all the communities within the New York metropolitan area should be initiated by the Westchester County Planning Commission.—*Engineering News-Record.*

Annual Election National Academy

At the annual election of the National Academy of Design, held in New York on April 26, Herbert Adams, the sculptor, was elected president to succeed J. Alden Weir, who was elected last year and who refused to serve again. The other officers, who were re-elected, are: Vice-president, Howard Russell Butler; corresponding secretary, Harry W. Watrous; recording secretary, C. C. Curran; and treasurer, Francis C. Jones. The newly elected academicians are Charles Rosen, De Witt Parshall and Ernest Lawson, painters; James E. Fraser and Paul Bartlett, sculptors; and Henry Bacon, architect.

Mr. Adams is the second sculptor elected as president of the National Academy. The late J. Q. A. Ward was also at one time president.

National Education Association

The Committee on Standardization of School House Planning and Construction, appointed by this association, will undertake the important and highly necessary object of the standardization of school house plan and construction.

It is composed of the following members: Frank Irving Cooper, chairman, architect, Boston; Dr. Leonard P. Ayres, Director of Education, Russell Sage Foundation, New York City; Charles E. Chadsey, Superintendent of Schools, Detroit; S. A. Challman, State Commissioner of School Buildings, Minneapolis; Rowland Haynes, Secretary Committee on Recreation, New York City; C. B. J. Snyder, architect, Board of Education, New York City; Dr. Lewis M. Terman, Professor of Education, Leland Stanford University, California.

An Exhibition of Scenic Art

The Brooklyn Museum announces an exhibition of models of stage settings, and drawings and designs illustrating the scenic art of the theater, opened to the public on May 2d. The exhibition will be on view during the month of May and until June 3d, inclusive.

It is a matter of general knowledge that the art of theatrical scenic decoration and setting has in recent years enlisted the efforts and energies of many of the greatest artist decorators of our day. This exhibition includes most of the important work that has been done in this direction in the last few years in the United States. The initial and necessary proceedings in the designing of operatic and theatrical scenery is the preparation of a model in which the ultimate ideas of the designer are embodied, and these models are the basis of the designs for the actual scenery and setting. These original models are the most important feature of the exhibition, but many pictures and drawings are also included. The Metropolitan Opera Company has loaned six models, and there are others for recent Metropolitan operas loaned by the designing artists.

There is a great variety of models, loaned by the principal scenic studios, and many drawings in color, including a complete set of stage settings used by the Washington Square Players.

The exhibition is one of unusual interest.

Washington State Society of Architects

At a recent meeting of the Washington State Architects, the following officers were elected: President, A. Warren Gould; vice-president, H. H. James; secretary, W. J. Jones; treasurer, J. L. McCauley.

"In Time of Peace——"

It was said by many in the days of the Third Empire in France that Baron Haussmann, who transmogrified Paris, was specially charged by Napoleon the Third to widen all the streets to their utmost limit, so that artillery might sweep away revolutionists, and to pave them with asphalt to prevent the building of barricades with stones. It is being similarly suggested that Petrograd was designed primarily to ensure the safety of the Tsars and their entourage from popular uprisings. Peter the Great built a fortress on the Neva where Petrograd stands now. The site was drained, two canals dug, and the gilded spire of the Admiralty became the center of the city. From the gardens in front of the Admiralty three roads run in straight lines to the suburbs, with three guns in the gardens, one pointing down each artery, and the roads could be swept with shell. Moreover, each road crosses the two canals, and a destroyed bridge would immediately cripple any line of advance. The same method of protection was planned for the Royal palaces. Tsarskoe Selo, ten miles from Petrograd, the country seat of the Tsar, is separated from the capital by an exposed road on which shrapnel could be rained with terrific effect. Peterhof, the chief summer Royal residence, is nineteen miles away from Petrograd. The extensive grounds and surrounding buildings would hold an army corps. So far, as in Paris in 1870, all precautions proved futile.—*Building News* (London).

Sketching in War Time

The recent arrest and detention for a period of twenty-four hours pending identification, of an artist engaged in sketching along the banks of the Hudson River near New York makes it necessary to warn architects and draftsmen of the inconvenience that may result from making any form of pictures out of doors during war time.

Those desiring to sketch or photograph should thoroughly post themselves on the regulations governing their locality and provide themselves with such written permission as may be obtained as a means of identification and in order to avoid the risk of arrest and detention.

PERSONALS

Mr. L. Jay Gamble, architect, Billings, Mont., will have his principal office located in the post office building, Glendive, Mont.

Messrs. Spencer & Powers, architects, announce the removal of their offices to suite 1305-8 Tacoma Building, 5 North LaSalle Street, Chicago, Ill.

Messrs. Howells & Thomas, architects, announce the removal of their Cleveland office to 2032 Euclid Avenue. Manufacturers' catalogs and samples are desired.

Charles W. Steinbaugh and Frederick Scholer, architects, announce the formation of a partnership, under the style of Steinbaugh & Scholer, for the practice of architecture. Offices at 784-786 Brandeis Theater Building, Omaha.

INDUSTRIAL INFORMATION

Columbia Fire Escapes

Catalog F, illustrating Fire Escapes and miscellaneous work manufactured by the Columbia Iron and Wire Works Company, Canton, Ohio, has recently been issued. The object of the catalog, it is stated, is to provide a ready and convenient reference work that shows the construction and general appearance of Standard Ohio Fire Escapes, which are believed to meet all usual requirements.

The use of fire escapes is almost universal in the case of buildings belonging to a number of classes, but their type and construction are usually determined by local or state laws. Two general factors demand consideration in the design of fire escapes—utility and appearance. These, it is believed, have been given due weight in the fire escapes offered by this company. A number of illustrations of installations are shown in which methods of support, arrangement and operation are all clearly set forth. Copy of this catalog may be had upon request.

LEHIGH VALLEY TERMINAL, BUFFALO, N. Y.

MR. KENNETH M. MURCHISON, *ARCHITECT*

THE AMERICAN ARCHITECT

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THE BUSINESSMAN-ARCHITECT

By S. J. T. STRAUS

PART II—METHODS OF FINANCING

IT IS vitally important that the financing of a building operation be complete in all its details at the outset. A clean-cut, thoroughly worked-out plan of financing will not only eliminate delays and enable the builder to obtain lowest possible bids from contractors, but will gage to a large extent the future success of the building. Of course, the architect is as vitally interested in this subject as the owner, for upon the progressive architect's shoulders usually rests a responsibility in connection with financing arrangements.

Present-day methods of financing are the results of an evolution covering a period of about twenty years. A quarter-century ago the modern skyscraper had not as yet made its appearance. But the need for building upward instead of spreading out was present. Cities were growing rapidly, and coincident with the growth, ground values were greatly enhanced. It was therefore recognized, in order to be profitable, buildings should be higher and larger. Two obstacles were, however, present. The first lay in the prevailing method of construction—increasing the thickness of the walls of a building as its height increased. This necessitated enormous walls of brick or stone, with the consequent loss of light and space. This was especially true on the lower floors, where room was most valuable. Consequently, the height of buildings was limited until the advent of the steel skeleton method of construction. Every architect is, of course, familiar with the development of this idea—how it solved the problem of higher buildings, as far as construction was concerned. The second obstacle was the difficulty of financing large building operations. The only course open, outside of financing the building entirely with one's own funds, was to seek a straight mortgage from an insurance company, bank or private individual. Straight mortgage financing, up to a certain point, was quite satisfactory, but when the loan required rose to large figures it was found practically impossible to invariably locate an investor who was capable or willing to tie up such a large portion of his capital in one proposition. Sometimes the builder was unable to secure financial co-operation to any extent, when money was tight or financial institutions had loaned out their allotment of capital for the year. As a consequence, the erection of buildings was frequently restricted or abandoned and city development retarded.

The idea of dividing a mortgage into fractional portions and disposing of these allotments in the form of bonds was originated by Frederick the Great in Silesia, Prussia, 1769. The idea proved so successful that it spread from Germany to other countries, and at the present time the straight mortgage is practically unknown in every other civilized country but the United States. It is a peculiar fact that the United States up to some twenty-odd years ago had not seen fit to use the plan to any extent. However, the difficulties in financing that developed about

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that time brought home its advantages forcibly. It was recognized how a mortgage thus divided, no matter how large, could be easily absorbed by the general public and more extensive building operations financed.

A mortgage was therefore made on a recently completed office building located in Chicago and bonds in denominations of $100, $500 and $1,000, amounting to the total, were issued and secured by a trust deed. They differed from the European plan in that the bonds were not debenture obligations but were directly secured by first mortgages. The opportunity to participate in a mortgage of this character, formerly available only to a few institutions and individuals, and offering unquestioned security, proved attractive to the general investor and he took advantage of it. This was the beginning of the first mortgage serial bond issue in the United States. It has gradually developed into what is now one of the most extensively utilized methods for financing buildings. Originating to meet an urgent necessity, and surviving and growing because of the manner in which the need was met, this method of financing owes its present-day popularity not only to the ease with which large operations are financed by its aid, but also to the extent to which it has simplified methods of financing that have sprung up during the last quarter-century of American city building.

Take as an example what was once the difficulty of financing a building under construction. The problem of bridging over the period of construction presented increasing difficulties as the buildings became larger. Banks, insurance companies and other investors frequently required that a building be "under roof" or completed before making a loan. Consequently, contractors and supply men were usually required to carry notes for a certain percentage of their contract. Terms of such obligations were from one or two months to, in some cases, several years. It is easy to see that firms accepting such deferred payments of the money due them are either assured of a larger profit included in their figures, or have some means of discounting such obligations. This method of utilizing contractors, materialmen and the like to make a project possible was very costly, and charges for carrying the deferred payments seriously reduce the profits of the owner.

This difficulty has been met by some financial institutions who will arrange for a temporary construction loan. This is designed to carry the owner through the building period, to be replaced upon completion of the work by a permanent loan. While the temporary construction loan has helped matters to some extent, it also has certain disadvantages. For instance, if construction work is greatly delayed, it is necessary to renew the loan, which entails added expense and considerable trouble. Sometimes, when the delay is caused by labor troubles, either at the building or in the mills where material is produced, the owner experiences difficulty in avoiding complications and in renewing his short term construction loan.

The first mortgage serial bond issue seems to possess an advantage in this respect. It is essentially long term financing and in the great majority of cases it is made when construction is begun and extends over a period of from five to twelve years. It also eliminates the extra commission which it is necessary to pay in connection with temporary and permanent loans.

Banks and insurance companies, however, are beginning to make a few construction loans covering a period of years. As an example of how loans during construction are handled, let me explain the system employed with first mortgage serial bond issues. With a loan of this character, after it has been accepted by the loaning institution and papers prepared, the net proceeds are placed to the credit of the borrower and paid out as the building progresses, on owner's and architect's certificates. These payments begin after the owner has expended the cash he is, himself, furnishing, which the loaning institution will satisfy itself is sufficient, when added to the loan, to complete the building. As payments are made, waivers of liens are required. With loans on completed buildings, the money

is immediately paid over to the borrower.

The issuance of stock is sometimes employed in financing buildings. It is very seldom that the building is completely financed by a stock issue, but where the ownership is with a corporation, the funds above the amount netted by the loan are usually provided by stock.

The word "serial" represents an important feature in serial bond issues. The gradual reduction of the principal is provided for through the serial prepayment or amortized mortgage method, amortized meaning "to kill off." In easy stages, from the earnings of the property, annual payments amounting to about 5% of the principal are made, after the second year, which offers three advantages to borrowers:

1. The annual interest charge is decreased each year as the loan is reduced, the largest interest payments being made when the building is new.
2. Payments of principal do not begin until the end of the second year, giving the borrower ample time to complete the building, rent it and place it on a paying basis.
3. At the final maturity of the bonds the loan can be renewed more readily, because of the reduced principal sum outstanding.

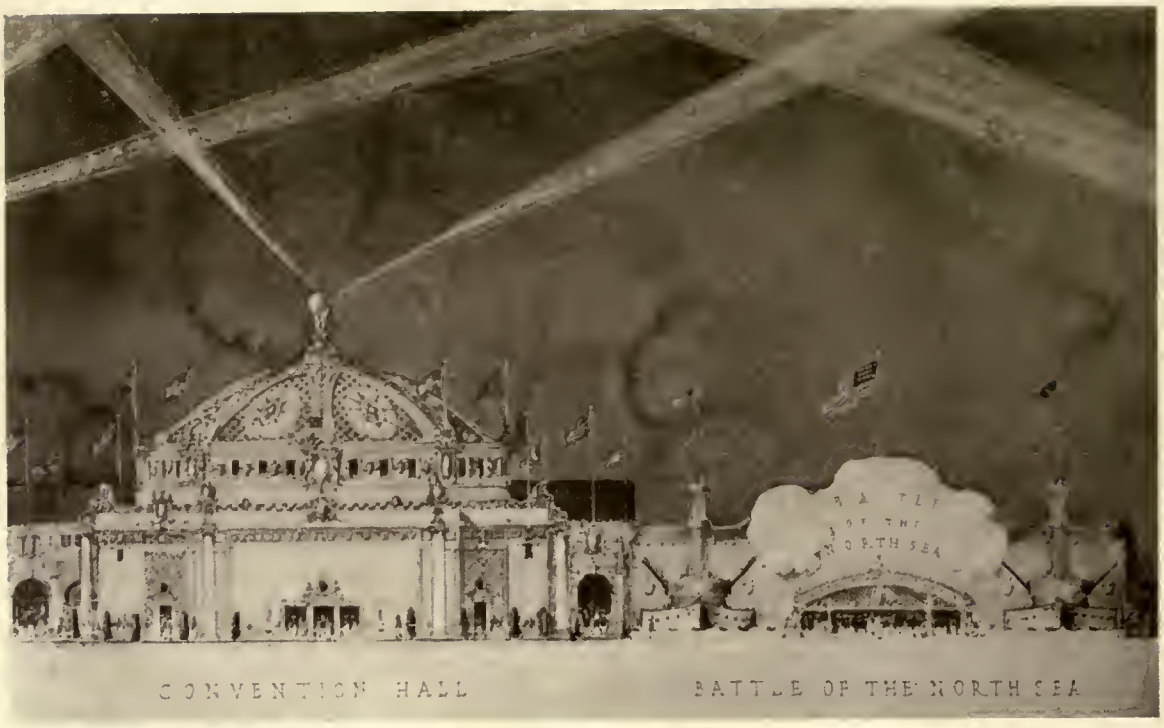
In connection with a construction loan the owner will often find that the loaning institution has anticipated and provided for many contingencies which he did not foresee at the beginning. He will find, in many cases, that trouble has been averted. He is protected by the papers prepared by the banker's Legal Department, which specializes and keeps in constant touch with our ever-changing real property laws. Also an exceptionally accurate and efficient system will account for every dollar going into the building, so that completion will not be delayed by lack of funds. He will find, as he goes along, that the loaning institution has greatly assisted in making his proposition successful.

The Obelisk as a Memorial

Prof. S. D. Adshead, in an address in London on "Monumental Memorials and Town Planning," says in regard to the Egyptian obelisks: "To the irresolute modern these great monoliths in syenite granite are truly records of the will-power and endurance of their makers, but since the time of the Egyptian dynasties no nation has felt equal to incurring the necessary energy and expense required to quarry stones of such gigantic proportions. Either, as at Washington, where the obelisk commemorating the independence of America, and is 660 feet high, it is built of small stones, or else a more complicated treatment has been adopted in place of the simple idea. When erected with small stones it is undoubtedly a mistake to give it the accepted proportions of the monolith; it should be shorter and more truncated in form. That erected in Phoenix Park, Dublin, and known as the Wellington Obelisk, is perhaps the best of its kind."

Walks Along Curb Increase Parking Space

In the thickly settled apartment-house districts of Chicago a narrow sidewalk is laid along the curb at the outside of a wide parking, with crosswalks to the main sidewalk at each entrance. The automobile driven by women is responsible for this arrangement. The car can arrive at any place along the curb, and neither are my lady's slippers soiled nor is American chivalry assailed for lack of a Sir Walter. —*Engineering News-Record.*



THE BRONX INTERNATIONAL EXPOSITION

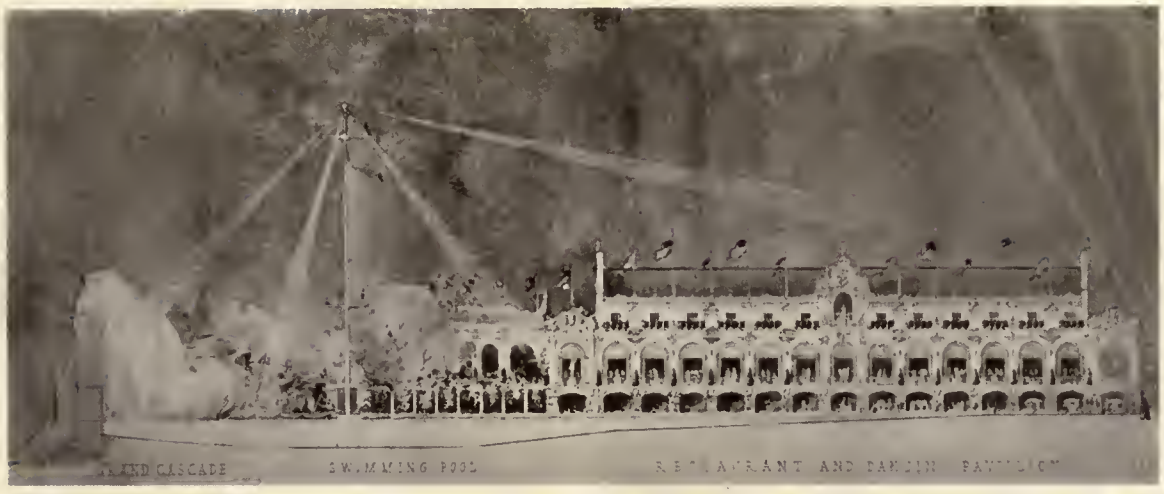
KENNETH M. MURCHISON, *Architect*

Illustrated by Sketches by the Architect

THE Bronx International Exposition of Science, Arts and Industries will be the first permanent exposition in the City of New York and will commemorate the three hundredth anniversary of the settlement of the Borough of the Bronx. It will open its doors to the public on May 30, 1918, and its many amusement features will undoubtedly attract a large public following.

The property, consisting of about twenty-five acres, is situated at 177th Street and the Bronx River, just south of the Zoological Gardens, and is served by the subway, many surface lines and two railroads. The N. Y., N. H. & H. Railroad has its station at the grounds and, through the New York Connecting Railroad leading to the great Pennsylvania Terminal at Thirty-second Street, taps the entire south, east and west.

The general style of architecture will be Spanish Colonial, a period which admits of interesting color schemes and of a stucco treatment throughout. As this is to be a twenty years' exposition, staff will not be used, but all ornament and sculpture will be cast in white cement. Including all concessions, there will be over a hundred buildings on the ground, ranging from ten feet in length to some four hundred feet. Eleven of the

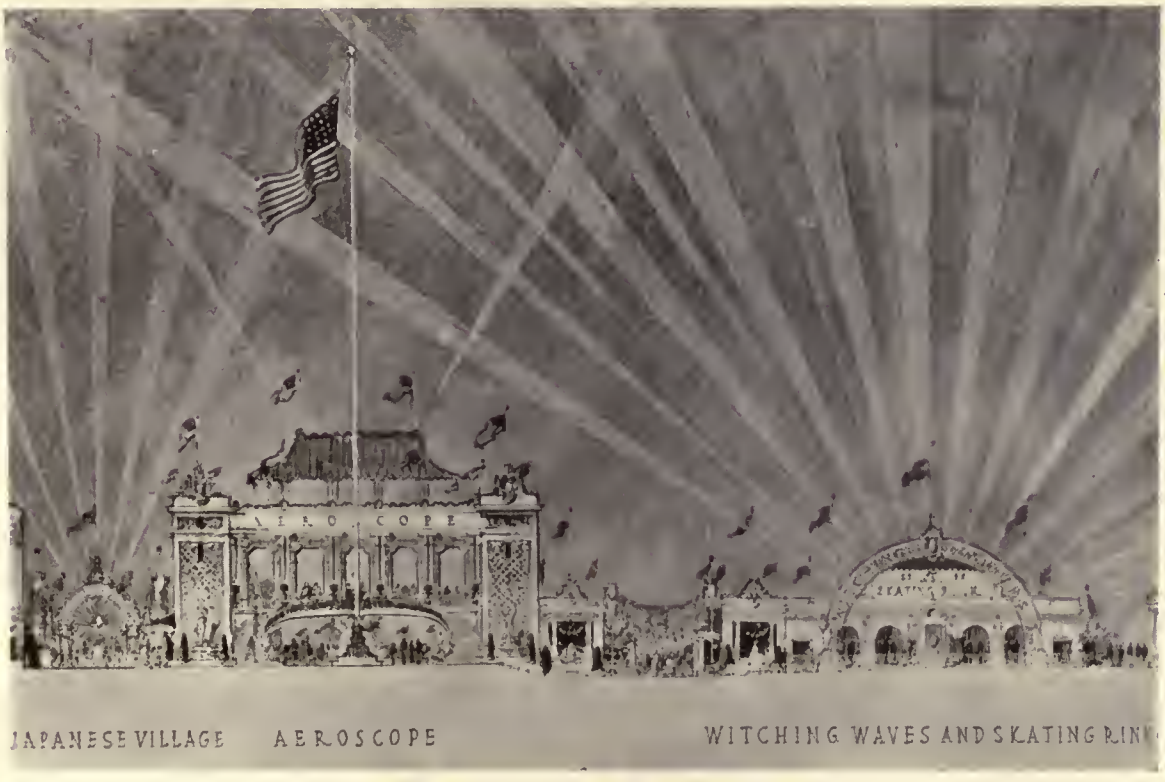


buildings will be used for exhibit purposes, the rest being concessions, theaters, restaurants, music halls and the largest concrete swimming pool in the world, with bath house facilities for about five thousand people. The sand beach will be 75 by 300 feet and the large restaurant at one end has provisions for parties in bathing costume.

Some of the most popular concessions at the Panama-Pacific Exposition at San Francisco will be reproduced here, among them being an aeroscope, whose car ascends to a height of 275 feet, giving its passengers all the sensations of an aeroplane ride.

The grounds are laid out to accommodate 150,000 visitors in any one day.

An effort will be made by the architect to give the young sculptors of New York an opportunity to have their work seen by the public and to that end a series of competitions will be held for some of the principal sculpture work under the au-



spices of the Beaux-Arts Institute of Design. The winners of these competitions will have their work put up to size by the exposition company. The first competitions will be for the three groups

of the main entrance gate, these groups typifying Commerce, Arts and Sciences.

The figures will be about sixteen feet high. Other competitions will be held for the various groups and figures for the

embellishment of the Court of Honor, the exhibit palaces and the convention hall.

Although the exposition will not formally open until 1918, work is in progress on the grounds and the grounds will be dedicated during the coming summer with an Allied Relief and Red Cross Exposition, a feature of which will be an interesting military tournament.

LEHIGH VALLEY TERMINAL, BUFFALO, N. Y.

MR. KENNETH M. MURCHISON, *ARCHITECT*

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MAIN WAITING ROOM

LEHIGH VALLEY TERMINAL, BUFFALO, N. Y.

MR. KENNETH M. MURCHISON, *ARCHITECT*

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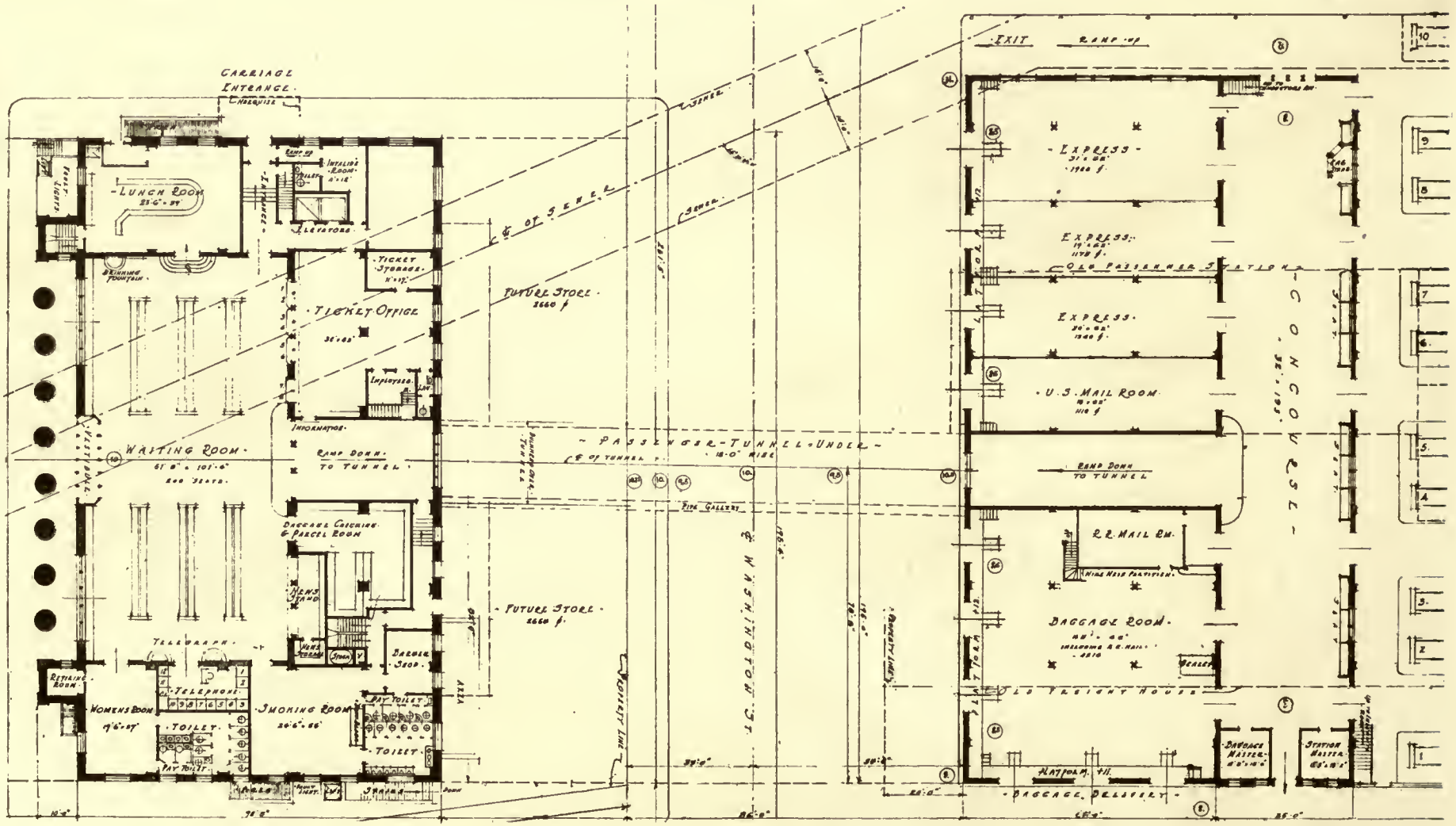

LEHIGH VALLEY TERMINAL, BUFFALO, N. Y.

MR. KENNETH M. MURCHISON, *ARCHITECT*

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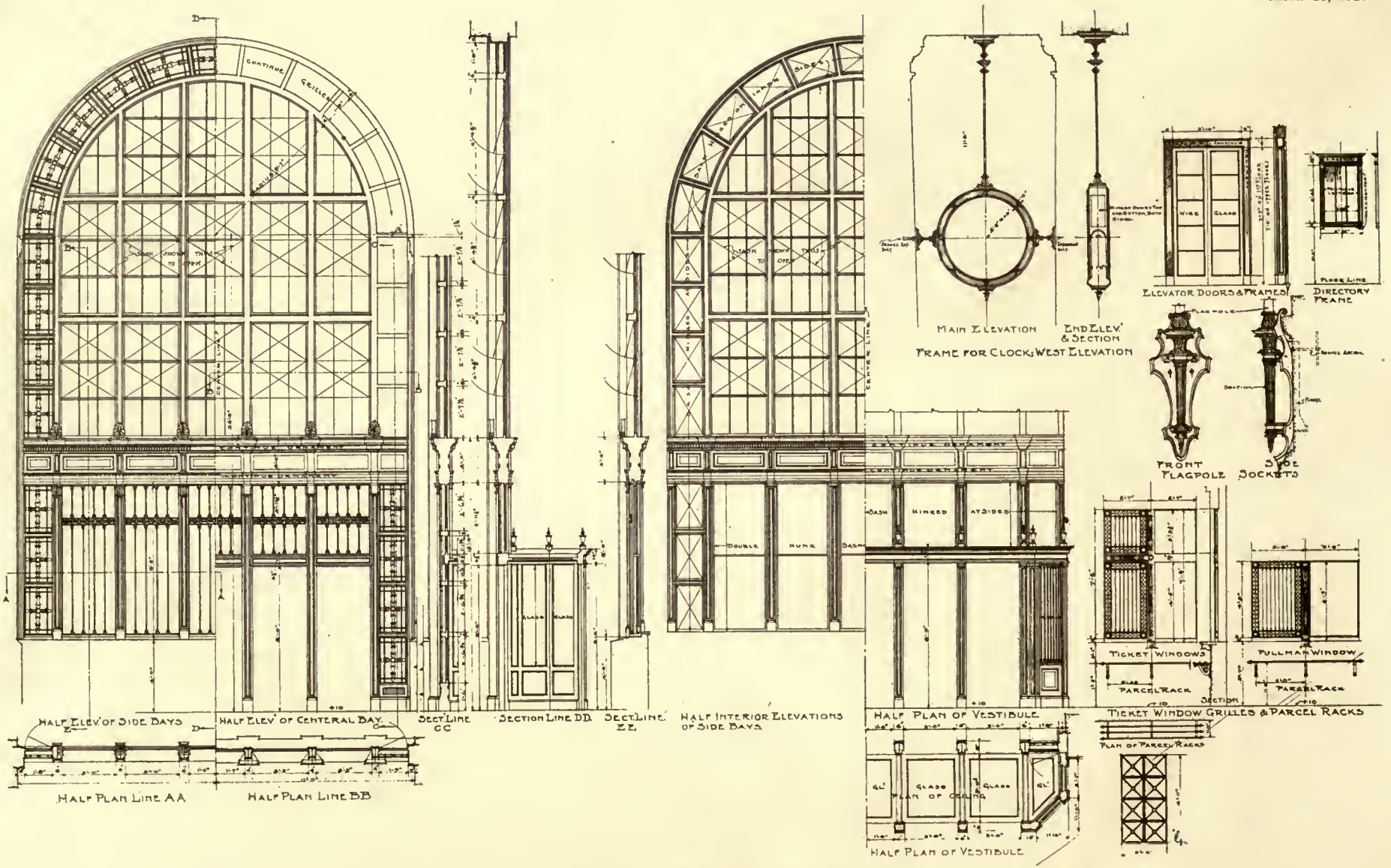

LEHIGH VALLEY TERMINAL, BUFFALO, N. Y.

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MAIN STREET FACADE

LACKAWANNA TERMINAL, BUFFALO, N. Y.

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RIVER FACADE

LACKAWANNA TERMINAL, BUFFALO, N. Y.

MR. KENNETH M. MURCHISON, *ARCHITECT*

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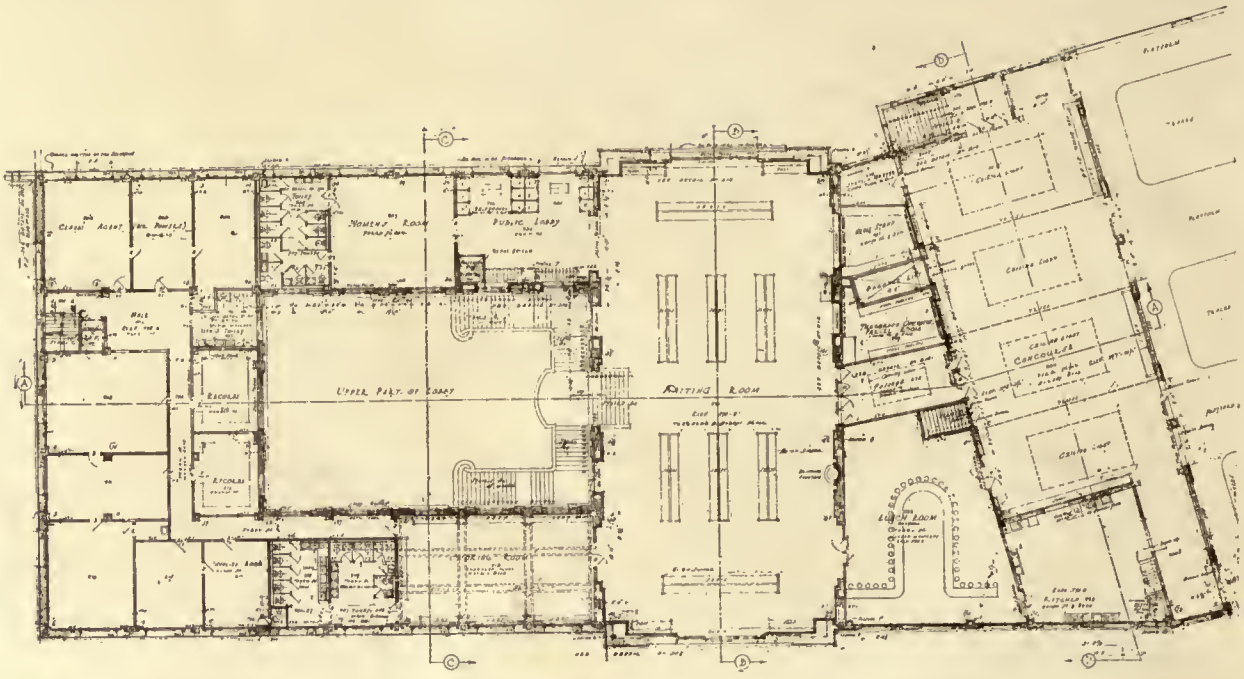

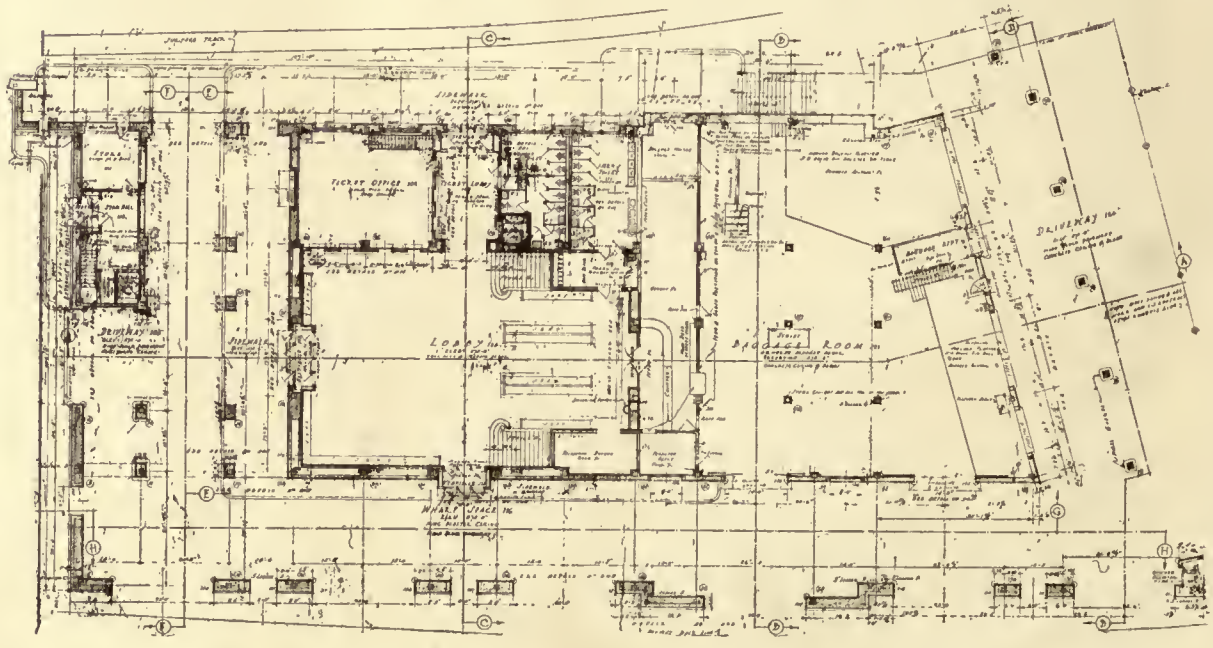

LACKAWANNA TERMINAL, BUFFALO, N. Y.

MR. KENNETH M. MURCHISON, *ARCHITECT*

MAIN WAITING ROOM

LACKAWANNA TERMINAL, BUFFALO, N. Y.

MR. KENNETH M. MURCHISON, *ARCHITECT*

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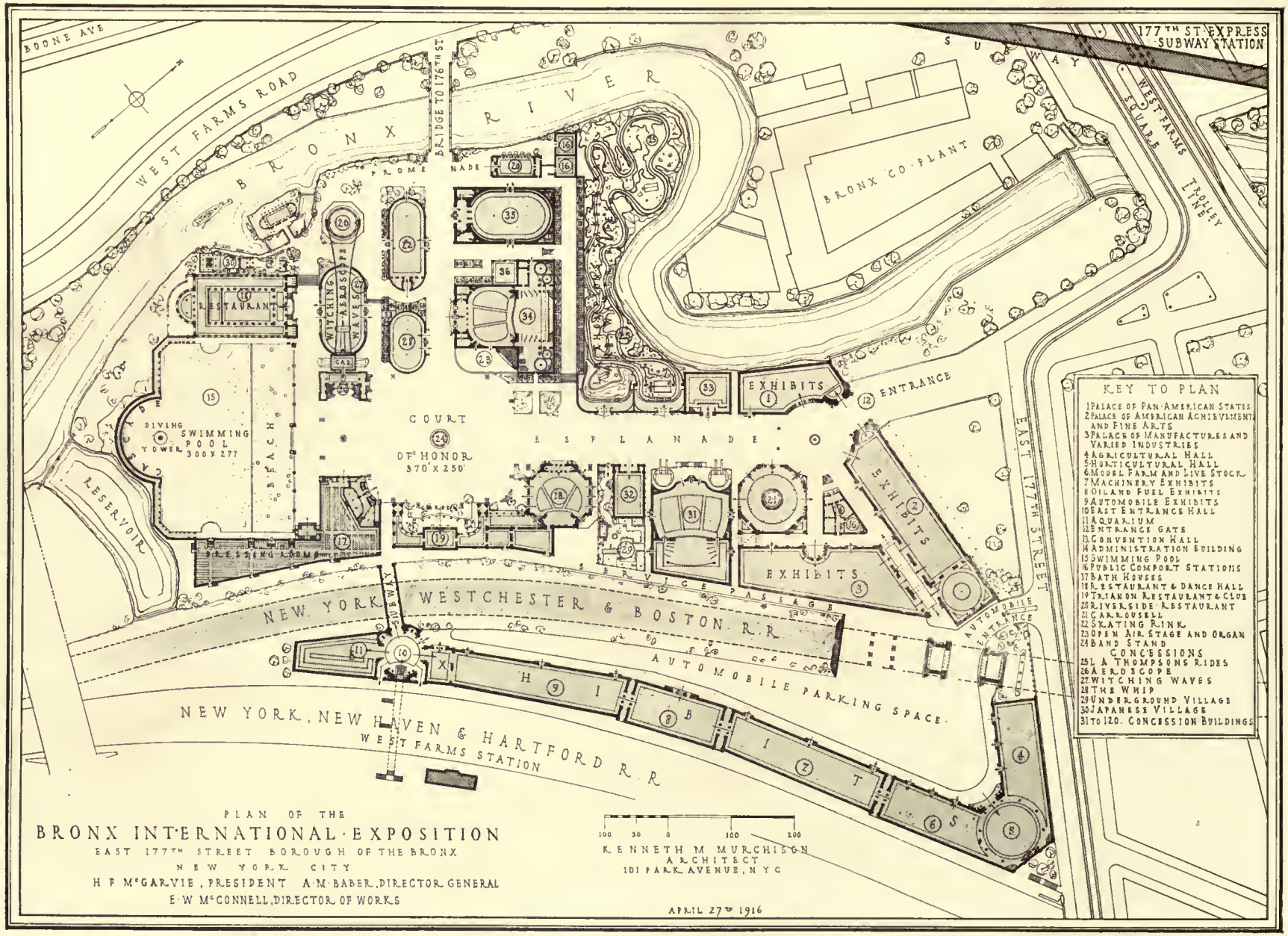
CONCOURSE

LOBBY

LACKAWANNA TERMINAL, BUFFALO, N. Y.

MR. KENNETH M. MURCHISON, *ARCHITECT*


BOONE AVE
WEST FARMS ROAD
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SUBWAY
WEST FARMS SQUARE TROLLEY LINE
BRONX CO-PLANT
RESTAURANT
WITCHING WAVES
AEROSCOPE
CAR
DIVING TOWER
SWIMMING POOL 300 X 277
BEACH
RESERVOIR
COURT OF HONOR 370' X 250'
ESPLANADE
EXHIBITS
ENTRANCE
EAST 177TH STREET
SERVICE PASSAGE
NEW YORK WESTCHESTER & BOSTON R.R.
AUTOMOBILE PARKING SPACE
AUTOMOBILE ENTRANCE
NEW YORK, NEW HAVEN & HARTFORD R.R.
WEST FARMS STATION
H I B I T S
KEY TO PLAN
1 Palace of Pan-American States
2 Palace of American Achievments and Fine Arts
3 Palace of Manufactures and Varied Industries
4 Agricultural Hall
5 Horticultural Hall
6 Model Farm and Live Stock
7 Machinery Exhibits
8 Oil and Fuel Exhibits
9 Automobile Exhibits
10 East Entrance Hall
11 Aquarium
12 Entrance Gate
13 Convention Hall
14 Administration Building
15 Swimming Pool
16 Public Comfort Stations
17 Bath Houses
18 Restaurant & Dance Hall
19 Trianon Restaurant & Club
20 Riverside Restaurant
21 Carrousel
22 Skating Rink
23 Open Air Stage and Organ
24 Band Stand
CONCESSIONS
25 L. A. Thompsons Rides
26 Aeroscope
27 Witching Waves
28 The Whip
29 Underground Village
30 Japanese Village
31 to 120. Concession Buildings
PLAN OF THE
BRONX INTERNATIONAL EXPOSITION
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NEW YORK CITY
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APRIL 27th 1916

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MAIN ENTRANCE

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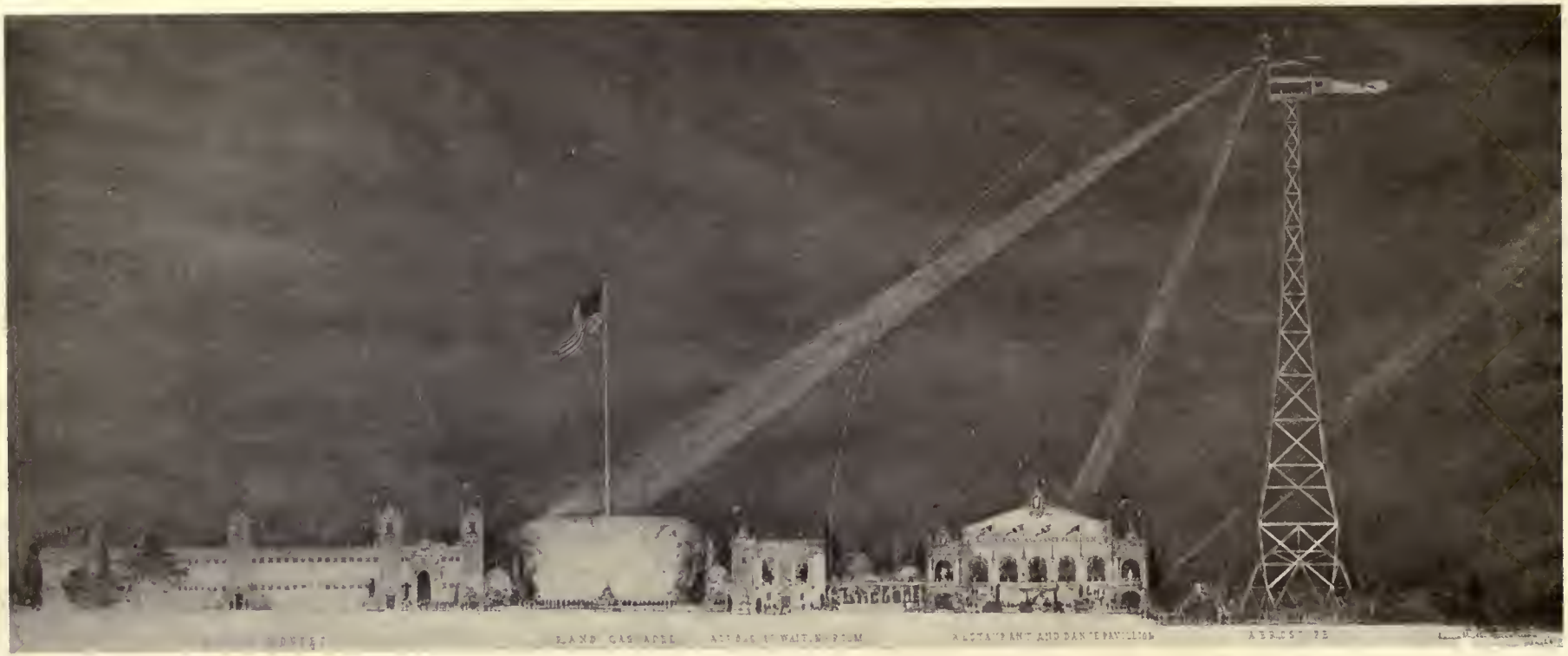


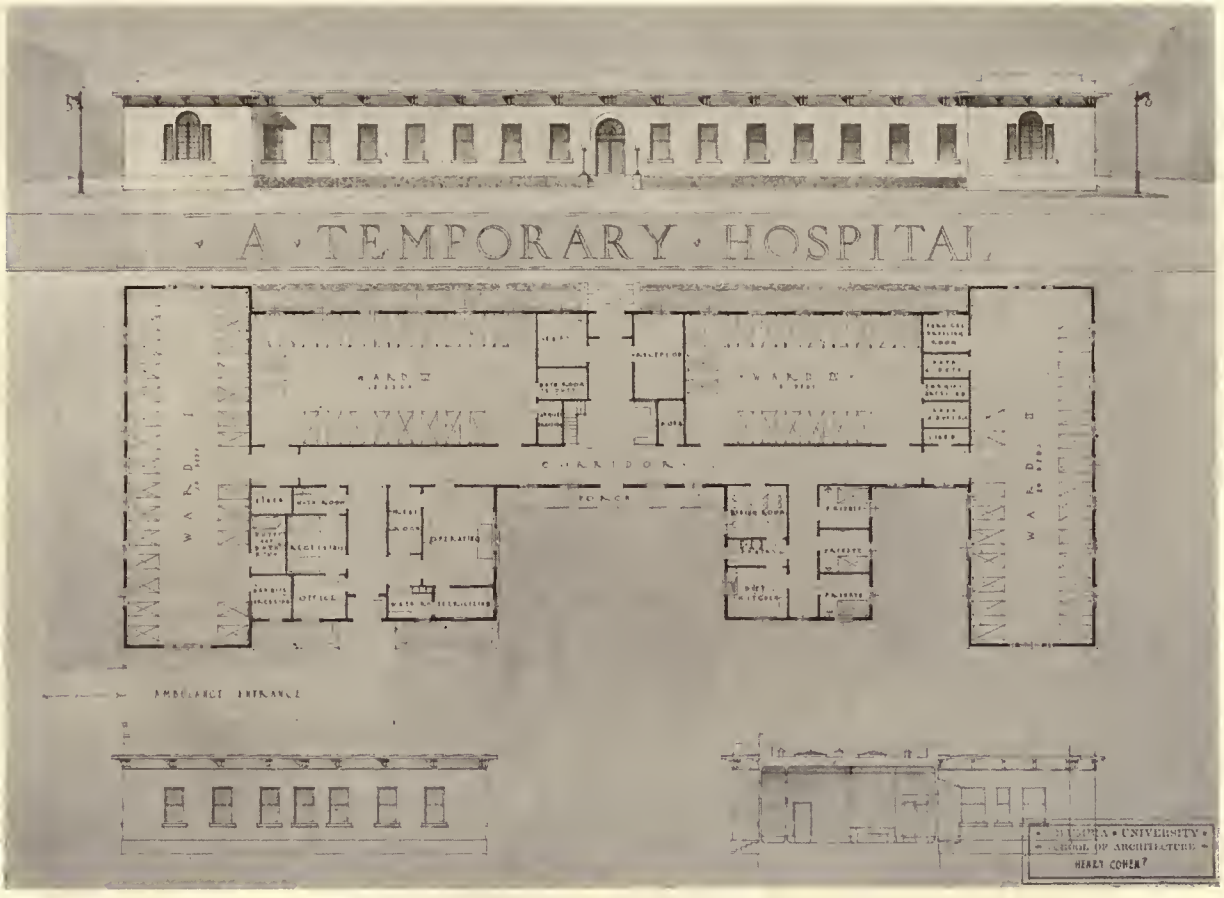
SOUTH ELEVATION

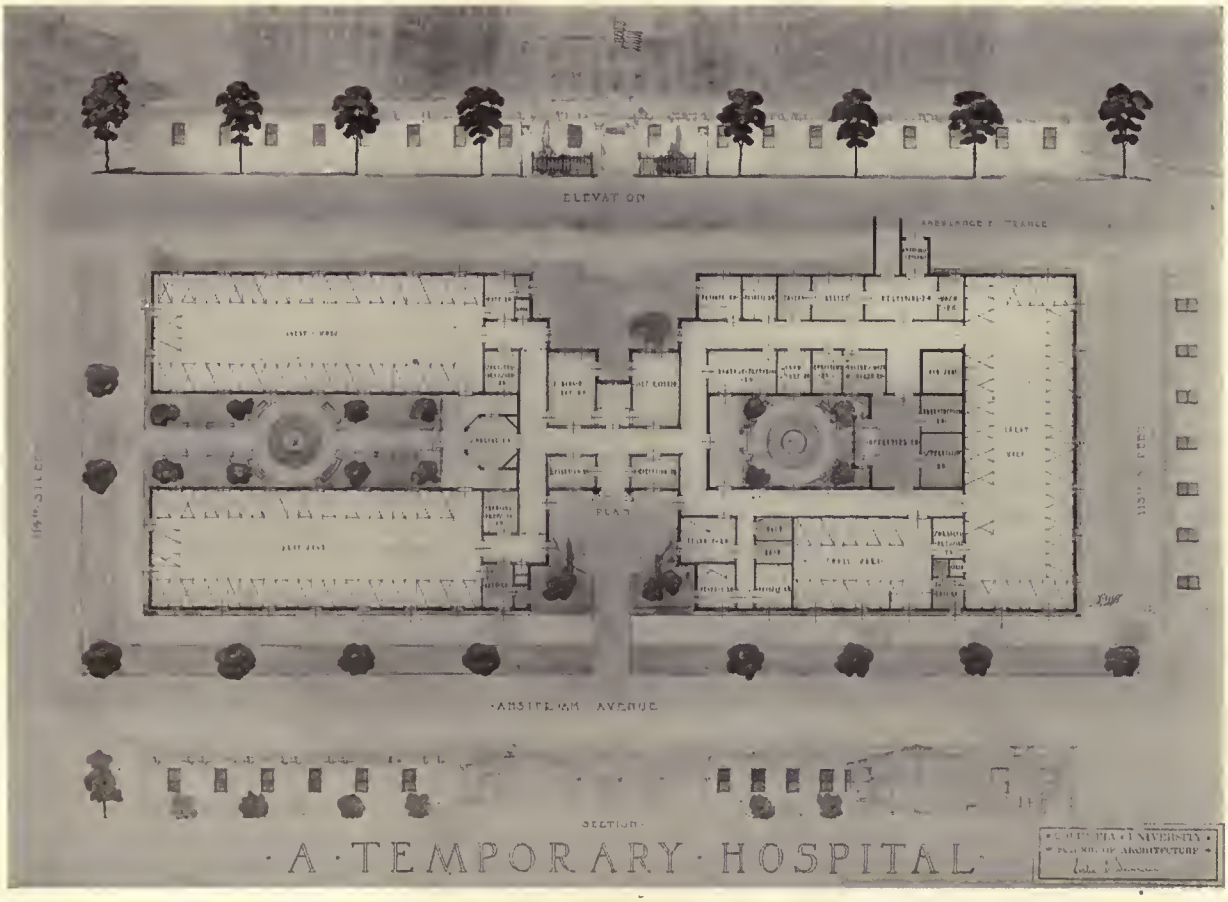
NORTH ELEVATION

ELEVATIONS ALONG EAST AND WEST AXIS LEADING TO COURT OF HONOR

BRONX INTERNATIONAL EXPOSITION, NEW YORK

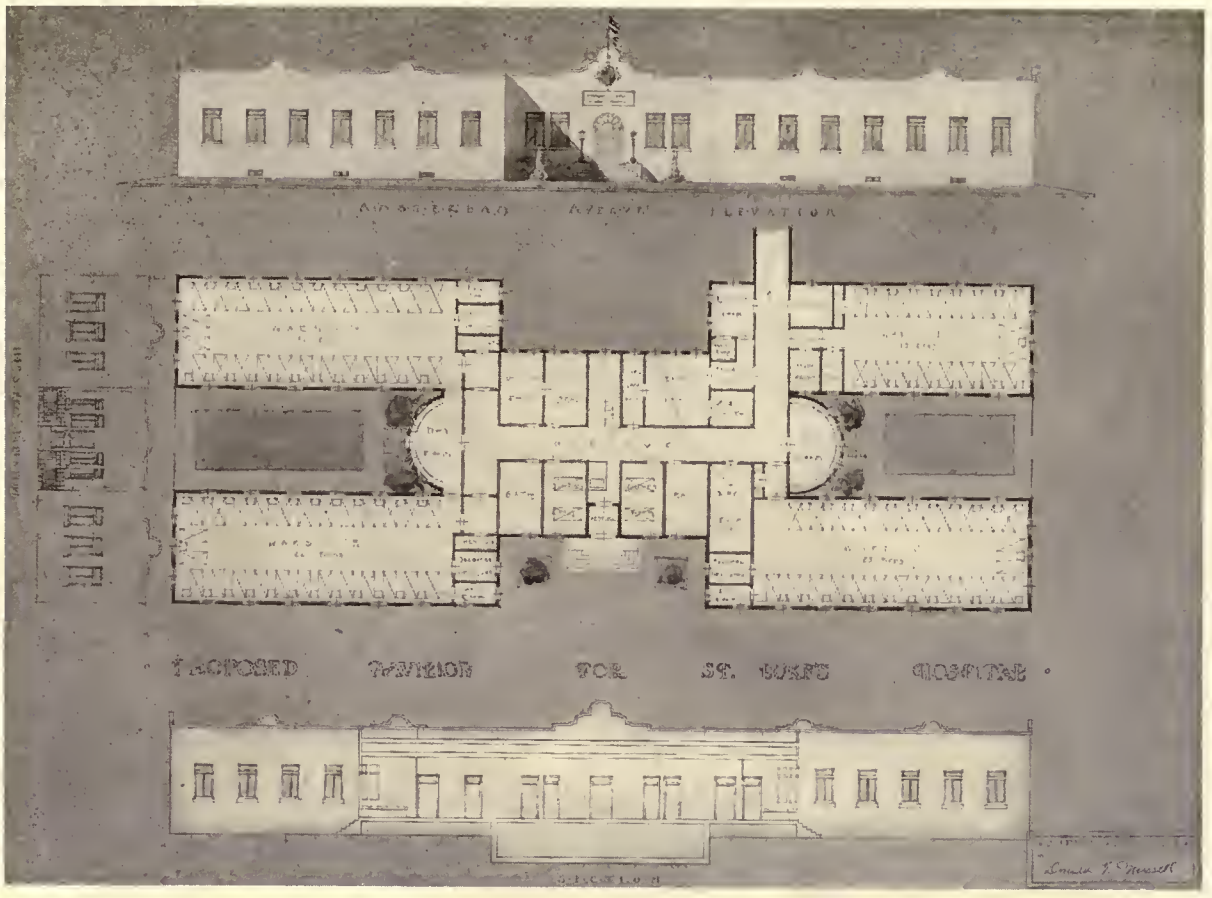
MR. KENNETH M. MURCHISON, *ARCHITECT*

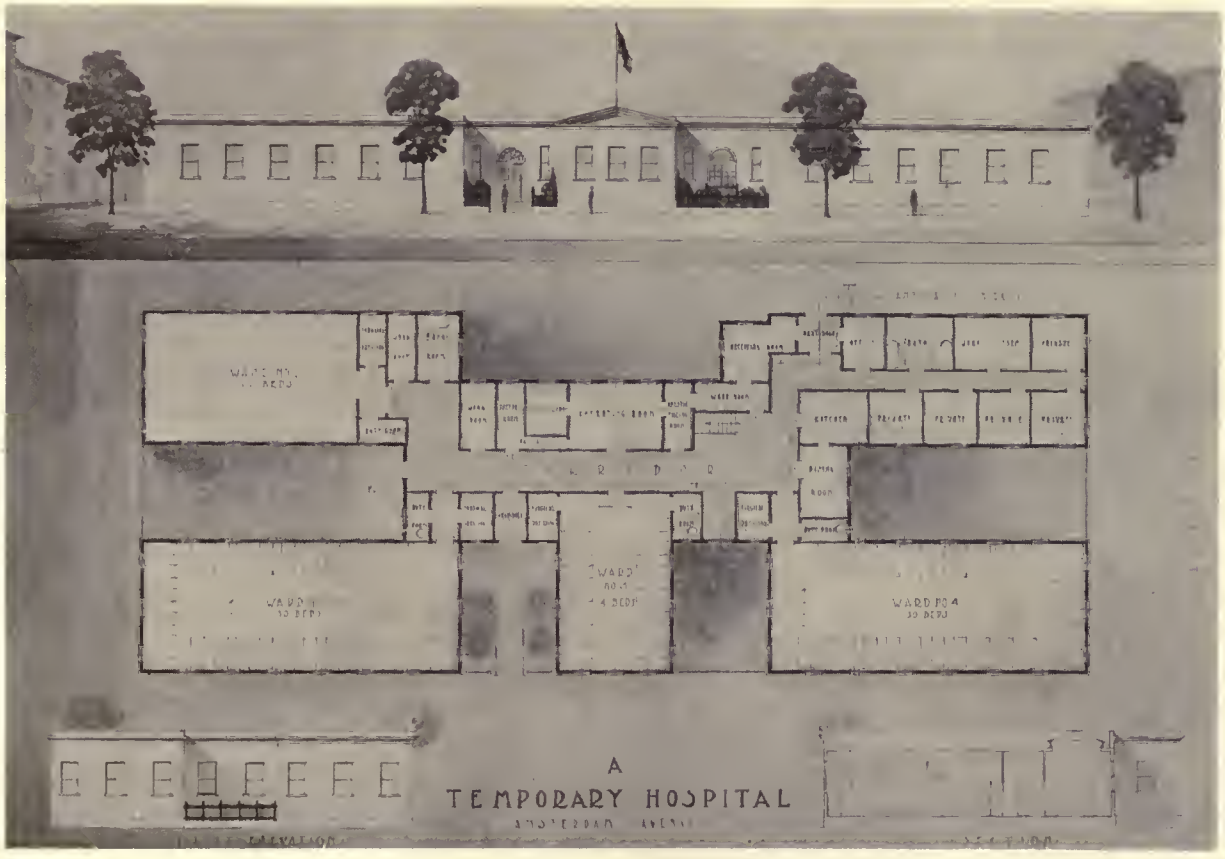




COLUMBIA UNIVERSITY, SCHOOL OF ARCHITECTURE, PROBLEMS IN DESIGN

ST. LUKE'S GOVERNMENT HOSPITAL





COLUMBIA UNIVERSITY, SCHOOL OF ARCHITECTURE, PROBLEMS IN DESIGN

ST. LUKE'S GOVERNMENT HOSPITAL

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VOL. CXI MAY 23, 1917 No. 2161

ARCHITECTURAL SCHOOLS IN WAR TIME

THROUGHOUT the length and breadth of the land American universities have maintained in our national crisis staunch and historically dignified traditions of service to the nation. As fountain sources of knowledge and as training schools for the adaptation of variegated human ability, they have been quick to turn to national advantage their vast resources in several scores of fields; their facilities of men, minds and materials; their carefully analyzed experiences in numerous scientific branches of endeavor; their great buildings and laboratories; the intricate machinery of teaching and of educational administration. And all of this has been in addition to the efforts which these institutions have made in the strictly military field, in which, be it said, the universities have established training corps to prepare men for every arm of both army and navy service from red cross to coast patrol, from aviation to field artillery, from radio engineering to cavalry. Of the architectural schools, however, only Columbia has thus far undertaken definite professional service in its own field of instruction.

As part of the nation-wide movement for the improvement of the equipment necessary to take care of a large army in active service, St. Luke's Hospital in New York City proposed to erect upon ground adjacent to its present buildings, and hitherto reserved for additional pavilions subsequently to be erected as part of an original plan, an emergency government hospital equipped to provide for the needs of two hundred military patients, wounded or sick, sent back from the firing line to regain health and strength. It was proposed to erect a structure temporary in a sense, but of such materials as to be of use for a space of years, if necessary; in other words, and in terms of war times, a permanent building as distinguished from a base hospital.

To plan and bring into execution this building the School of Architecture at Columbia, situated but three blocks distant, was engaged as architect and the head of its department of design was definitely appointed consulting architect. The serious business of designing the building in question was undertaken in one of the school's drafting rooms, in which was established a regular office with its quota of assistants, a full personnel from chief draftsman to office boy. Volunteers from the student body have carried on the work of this office, drafting and tracing and detailing, specification writing and other routine duties; these volunteers have been relieved from a proportionate amount of their required lectures and other courses in return for such service.

The value of such an undertaking to school and students alike, from the standpoint of national service as well as from that of professional teaching, is not to be underrated. The project offered unusual instructional advantages, chiefly for the reason that it made possible a happy combination of architectural practice with architectural instruction, blending the effect of the office and the class room in a manner altogether impracticable or impossible under normal conditions. As a matter of fact, this may be considered the first instance of the establishment of a

practical laboratory in connection with a school of architecture, in which a definite commission was undertaken.

Although the work goes on as though in an office downtown, the watchful eyes of several instructors prevent errors and promptly take advantage of each opening to inculcate principles of design and construction from the point of view of their practical application. The professor of construction revises all construction drawings and, under the tutelage of another instructor, the students themselves will superintend the building in process of actual erection.

In another place we reproduce a selected number of typical drawings, made as one week problems when the scheme was first proposed, together with the program of initial conditions.

There must be tasks similar to that found by Columbia in or near every great city containing a school of architecture. If the hospitals are to render war service —and thousands of convalescents may yet require care and treatment as a result of the portending conflict—the schools can everywhere stand ready to serve. What is more, buildings of several dozens of other kinds will likewise be required, barracks, munitions factories, canteens and many more.

The need for such buildings and for information as to their most efficient design and construction appears immediately, if it is borne in mind that even the woeful experience of Europe in The Great War has not been sufficient to cause any of our national departments to formulate typical or standardized designs and that no less than six months ago an architect of highest standing in this city who presented suggestions and drawings anent this important branch of service, based on actual experience in the employ of France, was coldly received in the national capital although his appeal went directly to high authority.

Again, the great agricultural movement—at the moment so manfully undertaken in all corners of the country, making truck gardens even of front yards in the suburbs and causing public parks to be plowed up for farming—is bound to require hundreds of buildings destined to serve farm purposes, housing and feeding farm hands, machines and implements, storing and maturing grain, and preparing it for transportation and consumption. Here also the schools may function and this applies directly to universities maintaining both a school of architecture and a school of agriculture. In all of these directions the schools can help in a definite sense and to the direct benefit of their students, who can only be the gainers and to whom recompense can justifiably be made in terms of academic credit.

The architect's professional service does not cease because of war; war should increase his responsibility, but as regularly as possible in the professional sense. Conscription or no—the nation needs his professional training, knowledge and experience. The time has come when architecture must lead the march of all the professions not regularly identified with war; the architects of the land must be solidly for service. Again, what the schools can do, may likewise be accomplished in the offices, and it must be remembered that in time of national stress all facilities and especially all organized facilities are the nation's.

RICHARD F. BACH.

TWO NEW BUFFALO TERMINALS

KENNETH M. MURCHISON, *Architect*

THE railroad situation in Buffalo has been materially altered by the recent completion of two imposing terminals, one for the Lackawanna and the other for the Lehigh Valley Railroad. Each is in a way a Union Station, as various roads are now using the facilities of these terminals.

The Lehigh Valley station is in reality two buildings separated by Washington Street, communication between the terminal building proper and the baggage building being by means of a tunnel under Washington Street. The exterior on the main building is of Indiana limestone. The division offices are on the upper floors surrounding the main waiting room. The treatment of the waiting room is very simple in character and is designed to receive five large mural paintings which have not yet been put in place.

The Lackawanna terminal is a riverside structure and is designed to take care of the lake passenger traffic. The ground floor of the station contains all the facilities necessary for the convenience of the passengers using these steamers and the railroad facilities are for the most part contained in the second floor of the building on a level with the passenger tracks. There will be an elevated freight track on the north side of the building, which track has not yet been built.

The exterior of the terminal is of brick

CONCOURSE

LEHIGH VALLEY TERMINAL, BUFFALO, N. Y.

DRIVEWAY
LEHIGH VALLEY TERMINAL, BUFFALO, N. Y.

in terra cotta and the interior treatment of the lobby and waiting room is of artificial stone.

On account of weather conditions at Buffalo the concourse in each building is a brick structure completely inclosed.

Both terminals were designed and built at the same time under the direction of the architect.

The Castle of Coucy

The Germans have razed the historic castle of Coucy, with its great keep 200 feet high and the towers, each 100 feet high, which crowned the angles of its walls. Once before in its history its destruction had been ordered. Mazarin was bent on rendering useless a fortress that was almost impregnable against such weapons as the time possessed. The men he sent for its destruction soon wearied of their task, and spared the work of art. They were content to deprive Coucy of its dangerous strength. They tried to blow up the keep, and their explosives brought down all the interior rooms and staircases, but the shell of the tower, with its enormous walls, remained intact. It was left for the Boches, with twenty-eight tons of explosives, if what they say be true, to destroy a wonderful and interesting building that had ceased to have any practical military value. The present state of the castle resembles a mountain side after a great landslide. Huge blocks of masonry and stone are piled one on the other, and only a few fragments of the outer walls, many yards thick though they were, are all that is left of the superstructure.—*Building News.*

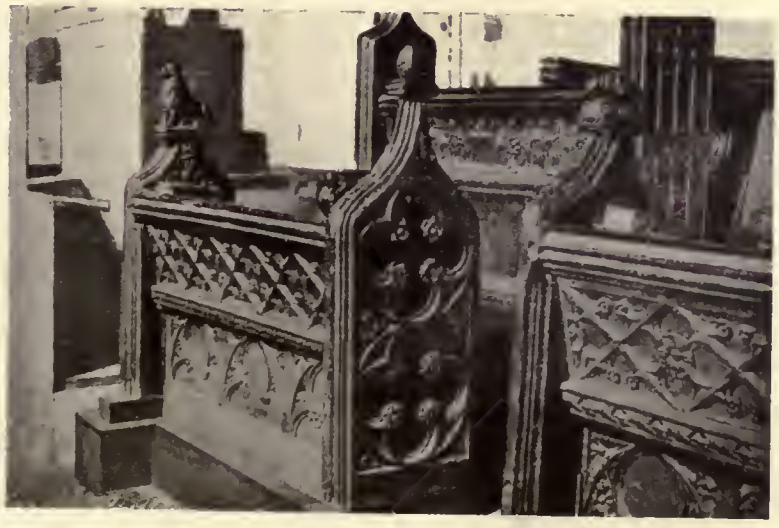
ORIGIN AND EARLY HISTORY OF PEW ENDS

THE BUILDING NEWS, in a recent review of Dr. Charles J. Cox's recently published book on "Bench Ends in English Churches," states:

"Probably the first permanent wooden seats in churches were those provided for the use of priests and clerks within the chancel during the choir offices. The custom of supplying permanent wooden seats for any part of the congregation came about very gradually, possibly originating with the fixing of seats in chantry parcloses or guild chapels, and thus spreading to the general body of the church. Fixed seats seem to have been called indifferently 'pews' or 'stalls' or 'seges.' The word 'pew' has long been associated with a seat in church, yet Milton uses the word to describe the sheep-pens of Smithfield, and Pepys applies it to a box at the theater. Etymologists have differed widely as to the origin of the word, but, taking the meaning to be an elevated or raised place, it is, as Dr. Cox remarks, easy to see how it came to be used; not only for an official or dignified seat in a church, but also for a set of seats or benches affixed to a frame to raise them, though slightly, above the dampness of the ordinary floor level.

"The bench-ends and seats were nearly always made from oak of first-rate quality, and, as oak was cheap and plentiful, are thick, strong, and heavy. Many are in as good condition to-day as when first carved, for old oak does not rot, if protected from damp, it simply crumbles away. The old oak used was cut in the winter when there was little sap, and the bark allowed to remain on. The design of the benches varied greatly, but the construction and general disposition of the seats were generally the same, consisting of a continuous sill laid along the floor, into which the bench ends were stubbed, the seats being supported on brackets placed at intervals, with the backs terminating level with the seats or carried down to the floor; the book-board, often an addition of later days, placed but little higher than the seat, and never slanting, being simply a ledge to lay the book upon when not in use. The ends or standards of the benches were often plain, with a molded cornice, especially in the earlier examples, but a vast number were elaborately panelled and carved. Favorite subjects in the later bench-ends, especially in Cornwall, were the instruments of the Passion, while in East Anglia the bench-ends often rise into a finial termed the 'poppy-head,' those in the Western counties being often horizontal. The name 'poppy' probably was an old French word derived from the Latin *puppis*, the figure-head of a vessel, surviving in our nautical term 'poop.' Hence the word *poupée*, a French child's doll, and the 'puppets' of our own language. Wilars de Honcourt, a thirteenth-century architect, has left behind him a curious manuscript, wherein he jotted down designs which took his fancy, including some bench-ends which he styles *poupées*. Hence the 'poppy heads' of the modern writers on English Gothic. The commonest form of poppy-head is that of the

(*FROM THE BUILDING NEWS, LONDON*)



AN EXAMPLE FROM HALSALL, LANCASHIRE
BENCH ENDS IN ENGLISH CHURCHES

(FROM THE BUILDING NEWS, LONDON)

AN EXAMPLE FROM BRAUNTON, DEVON
BENCH ENDS IN ENGLISH CHURCHES

fleur-de-lis, possibly purposely selected as the conventionalized form of the lily as associated with the Virgin Mary."

The Chair of Architecture at Sydney University

Certain correspondents promptly challenged our announcement, made some months back, that the endowment of a Chair of Architecture at Sydney University amounted to £2,000 a year. Such liberality seemed to them to be too good to be true—surely, said one of them, we must have made a mistake. It could not be £2,000 a year, but the interest on that sum! True, they said, the best interest that could be got from an investment of £2,000 would not amount to a princely fee for the professor, but it was nevertheless the more conceivable hypothesis. But we made no mistake—£2,000 a year it is; and our Sydney contemporary *Building* states that it is to be allocated as follows: One professor, £1,100 per annum; one assistant, £250 per annum; apparatus, £650 per annum. It is a curious commentary on the estimation in which architecture is held in this country that the figure we gave seemed incredible. Many a professor of "the humanities" gets twice as much for services that are nowise more important. On the other hand, we doubt whether our few occupants of architectural chairs get half as much. They have, it is true, opportunities for practice; but it is hardly fair to them to take this fact into account. University chairs of all kinds depend mainly upon the generosity of some "pious founder," and hence there is wide discrepancy in the emoluments; but an important point about the Sydney chair is that it has been endowed by the Government. If our own Government, impoverished by the war, is for some time to come incapable of endowing university chairs, the least it can do is to ordain that existing endowments shall be more equitably distributed—that unnecessary chairs shall be abolished and new chairs established instead.—*Architects & Builders Journal.*

The Abnormal Use of Timber in England

Among the many lessons taught by the present war is the necessity for efforts at afforestation in Europe when the period of rehabilitation is reached. England alone estimates the value of the timber loss during the past three years, owing to abnormal demands, at between one hundred and fifty and two hundred million dollars, and sees in the future grave danger of a very serious shortage, unless some practical method of afforestation is pursued.

No work of conservation will be of greater importance than that having for its object the protection of timber, and any steps that will serve to promote its more economical use, and the eventual replacement, will undoubtedly be a movement in the right direction.

Problem Program, Columbia University School of Architecture

For illustrations, see plate section

AN EMERGENCY HOSPITAL IN CONNECTION WITH ST. LUKE'S HOSPITAL

(ST. LUKE'S GOVERNMENT HOSPITAL)

IN view of a possible war in America, St. Luke's Hospital has in contemplation a temporary hospital extension to accommodate 100 patients. This building shall be one-story high with a flat roof but with a possible extension of a part of it two stories high should occasion arise.*

The building is to be located on the open space to the west of the present hospital, on a plot about 76 ft. x 200 ft. and is to be served by the present hospital management with food, steam heat, general supplies, etc., which are to go out from the present hospital in a basement entrance supposed to be at or near the axis of the lot. The present ambulance entrance is to serve the proposed extension, and all four sides of the property are sufficiently open to light and air to permit the placing of the building and pavilions in any way desired.

The patients are to be all of one class or rank and will be minor cases only—the serious cases and major operations being taken care of in the present main hospital. The extension hospital shall contain accommodations for 95 to 98 patients in ward beds and 2 to 5 patients in private or quiet rooms. The requirements are grouped here for clearness as follows:

I. Ambulance entrance, office 100 sq. ft., receiving room 140 sq. ft. and wash room 50 sq. ft.

II. Emergency operating room 250 sq. ft., anesthetizing room, or rest room 70 sq. ft., sterilizing room 100 sq. ft., and doctors' locker and wash room 80 sq. ft.

III. Wards. The patients may be accommodated in three large wards and one or more minor wards, or by other arrangement. Each ward shall be 25 ft. wide and must not have more than 30 beds, which are to be spaced about 5 ft. on centers. The window area shall not be less than 10 per cent of the floor area. Each large ward shall have a surgical dressing room 70 sq. ft. and a duty room 50 sq. ft., containing lavatories and a toilet.

IV. Several small private or quiet rooms.

V. For the whole group of wards, private rooms and emergency operating room there shall be provided about 200 sq. ft. of work rooms for preparing bandages, storing linen, etc.; and 2 bathrooms.

VI. Diet kitchen for special diets 140 sq. ft.; a day and dining room for convalescent patients 140 sq. ft.

All sizes of rooms are approximate. No provision need be made for future elevators. The outside walls are to be shown 6 in. thick, and the inside walls 3 in. thick. The courts between pavilions shall not be less than 20 ft. Some rooms, such as store rooms, sterilizing rooms, etc., may have top light if in a position where a second story will not cover them. Exterior to be shown plain as if covered with stucco. Porches can partially occupy court space.

*Since the declaration of a state of war between the United States and Germany the requirement has been increased to 200 beds and the building has been designed accordingly.

Gargoyle Club, St. Paul, Minn.

If present plans are carried to consummation, the Gargoyle Club of St. Paul, comprised of architects and members of allied professions, will co-operate with the University of Minnesota in architectural design and research work. The affiliation may be accomplished next summer in order that active work may begin in the fall.

Mr. B. W. Day, president of the club, is quoted as saying that there is every reason to believe that the affiliation will be made. The Gargoyle Club hopes to work in conjunction with the St. Paul association in connection with housing and city planning problems.

Many of the members of the Architects' Club are members of various committees of the St. Paul association, so the two organizations will be closely allied in civic improvement plans.

In connection with the housing survey being conducted by the St. Paul association, the Gargoyle Club held an open meeting at its club house, Ramsey Street and Pleasant Avenue, on April 10.

Personal

Mr. Charles E. White, Jr., announces the removal of his offices from the City Hall Square Building to the Fisher Building, 343 Dearborn Street, Chicago, Ill.

Recent Legal Decisions

What Was the Contract?

How many times architects will make a verbal agreement with the owner to make sketches and procure estimates for a proposed building during one interview and at subsequent interviews make further verbal arrangements for the architect to make working plans and specifications for the building sketched, obtain bids for constructing the same, superintend the construction, and after the final interview decide to have the whole matter put in writing, which they never do. The architect simply goes ahead with the work which, in accordance with what he understands the verbal contract was, and soon there arises a controversy as to what the verbal agreements were concerning what the architect was to do and what he was not to do. On February 23, 1917, the Supreme Court of Minnesota decided a case like this, in which the owner admitted during the trial of the case that he had employed the architect to make the sketches for the building, but denied that he had, in such interviews, employed him to make working plans and specifications for the building they sketched, to obtain bids for construction of the same or to superintend the construction. The architect claimed he was employed to do all of this and therefore sued by the owner for pay for all. In deciding against the architect, the court held that when it is understood between the parties that the entire agreement is to be put in writing and it never was put in writing, there is a strong presumption of no contract at all, as they make the writing part of it a condition precedent to its completion whereby the parties have consented to all terms of the contract, the mere reference to a future contract in writing will not negative existence of a present one. In view of the fact that the evidence shows the parties did not consent to all the terms of the original understanding, the suit of the architect must fail. (Lamoreaux v. Wiseman, 161 N. W. 504.) Decided Feb. 23, 1917.

Owner Makes Payments and Then Complains

Now and then we find an owner who allows the contractor to proceed with the building, makes the payments in accordance with the contract, does not complain to the architect, moves into the house and after occupying it for a while, complains to the architect about the house not being built according to the contract. Such an instance arose a few days ago in a case entitled Leonard v. Home Builders and decided by the Supreme Court of California which, among other statements, said: "Where a contract is made with the owner to erect the building on his land and there is a breach by the contractor, neither the occupation of the house by the owner after its supposed completion, nor the payment of the price, though accompanied by knowledge of the owner of the defective construction, is sufficient, taken alone, to operate as a waiver of a breach of the contract. The owner does not necessarily waive his right to damages by the mere fact of payment, with knowledge of the defects, or taking possession of the house and occupying the same. Still these facts should be taken into consideration, determining whether or not the owner did waive his right to complain. Furthermore, one who buys property upon its warranty as to its quality need not reject the property when offered in a defective condition, but may stand upon the contract, accept the defective property and then sue upon the contract and recover the damages by its breach. The final payment by Leonard was also accompanied by written notice that he was going to claim damages for the defective construction, which in itself shows that he had no intention to waive his right to claim damages for the defective construction. The contract, too, has very stringent provisions for prompt payment by Leonard. In view of all the circumstances Leonard should have the right to recover damages though he did not claim them until he had occupied the house for some time. (Leonard v. Home Builders, 161 Pac. 1150.)

LOOKING NORTHEAST ON FIFTH AVENUE FROM THE TERRACE OF THE PUBLIC LIBRARY.

MESSRS. CARRERE & HASTINGS, ARCHITECTS

A New Era in Street Decoration

PREVIOUS celebrations in New York, as far back as we can recall, with perhaps the exception of the Dewey reception, have been marked by much bad taste in street decoration. At the time of Admiral Dewey's return to this country there was an effort, led by the National Sculpture Society and the architects of New York, to execute a decorative scheme of such scale as would warrant its later execution into permanent material as a record of an important incident in our national life. The Washington Arch, at lower Fifth Avenue, designed by Stanford White, was, by popular subscription, rebuilt in marble. It stands today as a record of Admiral Dewey's great achievement and as evidence of what may be done in the beautifying of our city streets when set about in the proper manner.

The celebrations held in New York between that time and the present very dignified reception to the French and English Commissions may well be ignored. They were, in the main, marked by so many evidences of bad taste in street decoration as to rob the man of æsthetic perception of any satisfaction in the occasion.

When the French and English Commissions accepted New York's invitation, Mayor Mitchel, with commendable sense of the artistic fitness of things, appointed a committee on street decoration, composed of leading architects, painters, sculptors, and other men prominent in the allied arts. Mr. Cass Gilbert was chairman of the committee. There were ten civic locations that it was decided to decorate, and each one was given over to a chairman and subcommittee. The focal point of all the decorative treatment was the Court of Honor, located on the two blocks on Fifth Avenue between Fortieth and Forty-second streets, with the Public Library and reviewing stand forming the western boundary. Logically, Thomas Hastings' committee was selected to undertake the decoration of this space, for, as one of the architects of the Public Library, any scheme outlined by Mr. Hastings would be one that would properly supplement the lines of the Library Building as well as the general aspect of Fifth Avenue at this point.

A number of interesting and instructive features developed in the inception and completion of this decorative scheme. They comprised speed both in the origination of the decorative scheme, the overcoming of physical difficulties, and the suggestions developed that if carried into effect will materially lessen the same difficulties on future occasions. The design having been evolved, and the clay models of the pylons and accessories completed, on Tuesday morning, May 7, at seven o'clock, the plaster work or casting was begun. The twenty-two pylons, balls, eagles, and other pieces, were all completed by midnight of the same day, or in seventeen consecutive working hours. The large bases were meantime being set, and each of these required an an-

chorage of a ton of stone hauled from a nearby subway excavation. All these operations were conducted without blocking traffic.

The probability of similar decorative treatment of this locality at different times suggested to the committee that as much of the work as possible be put in enduring form to serve on future occasions, thus reducing in a large measure future costs. It also suggested the placing of permanent sockets in the sidewalks as supports for the many flagpoles which bordered the avenue at both sides. As this country has now assumed closer diplomatic relations with European countries than ever before, and as it is probable that these relations will continue, it is well to look ahead to the requirements of similar formal occasions and to act on the lessons taught in the designing and completing of this important decorative scheme.

LOOKING WEST, ALONG SOUTH SIDE OF COURT OF HONOR.
MESSRS. CARRERE & HASTINGS, *ARCHITECTS*

Finally, there has been shown how thoroughly an architect's office is prepared to deal with emergencies, and how well it is able to surmount difficulties that in this instance seemed insurmountable to

others. When the decorative treatment had been evolved the execution within the limited time was the problem. Large firms whose special lines were in decoration were approached, and all claimed that the work could not be accomplished in the specified time. Undaunted, the architectural office of Carrere & Hastings went at the job, each man assigned to a specified task, and all supervised by Mr. Hastings and his committee. Casting the models, hauling the many loads of completed pylons and more than twenty tons of stone, setting all this material in place, all was done in the appointed time. Some of the office force was continually on the work for two consecutive days, and when it was completed the tired but satisfied workers got the rest they had earned, and slept undisturbed by the vociferous throng that acclaimed their work, and the distinguished guests to whom they were according a characteristic New York welcome.

Architectural League Food Battalion

Following is, in part, copy of a circular issued by the Architectural League of New York:

The Architectural League is planning to render immediate service in the present food emergency by supplying volunteer labor for the cultivation of vacant land at Forest Hills Gardens, with the co-operation of the Mayor's Food Committee and the Agricultural Department of the Long Island Railroad. The general plan is as follows:

First—That the offices permit their members to take one week of their vacations, distributed over three and a half months, one-half day each week.

Second—That the members of the offices shall contribute for the public benefit and that of the Allied War Relief their services for the cultivation of the land above mentioned under the direction of skilled experts and under arrangements such that there will be each day a squad of men sufficient in number to carry on the necessary work until the products are harvested. A period of fourteen weeks will substantially cover this time. Their contribution would therefore consist of one-half of their vacation period of two weeks and would not involve any expense to the office. The schedule of service would be so arranged as to mean little or no disturbance of the office work.

Third—The heads of firms or others, who for any reason could not give their own time, might contribute financially to the necessary sum required to carry on the operation, although this could be undoubtedly financed by a special committee or application for funds already offered for that purpose.

Fourth—For certain reasons it might be well to distribute in part return for services and money advanced a certain proportion of the products of the crops raised, but I should be inclined to urge the sale of the products at the discretion of the Mayor's Food Committee with whose co-operation the work would be conducted and the devotion of the entire proceeds to Allied War Relief.

It appears that under such an arrangement as I have indicated, with a force of 150 to 200 volunteers, each giving one-half day a week, the cultivation of 30 or 40 acres could be successfully carried out with results that would benefit not only the men themselves physically but teach them a very valuable agricultural lesson,

THE ARCHITECTURAL LEAGUE POSTER.

not to mention the necessity of economy in the consumption of food, and with a result in actual produce that would be a positive contribution upon which each one of us could look with a certain amount of satistion.

There are, of course, a number of women assistants, typewriters, stenographers and secretaries, and my suggestion is that their services be used on the same basis for the executive work involved in carrying on the operation.

GROSVENOR ATTERBURY,
President.

Registration of Architects in New York State

The following communication has been received from Mr. D. Everett Waid, president of the New York State Board for Registration of Architects:

Attention is called to the fact that the New York State law regulating the practice of architecture has recently been amended.

One of the amendments extends the exemption period whereby certificates of registration may be issued to architects who were in practice previous to the enactment of the original registration act, namely, April 28, 1915. Any architects who were in practice in New York State previous to that date may now secure certificates, provided their applications are filed before Jan. 1, 1918, and provided such applications are approved by the Board of Examiners. Application blanks may be secured by addressing the Department of Education, Educational Building, Albany, New York.

One of the amendments just enacted is of interest to architects of other states and reads as follows: "Any architect who has lawfully practised architecture for a period of more than ten years without the State shall be required to take only a practical examination, which shall be of the nature to be determined by the State board of examiners and registration of architects."

One of the amendments of the New York law which is of interest to those of other States contemplating similar legislation is as follows: "But this article shall not be construed to prevent persons other than architects from filing applications for building permits or obtaining such permits."

Fire in New York City Hall

Owing to the carelessness of a workman, who left a charcoal brasier burning in the cupola of the New York City Hall, a fire was started on May 10 that for the second time in the history of this building destroyed the cupola and menaced the safety of the entire building. On the morning of Aug. 18, 1858, the cupola of the City Hall was destroyed, and it was rebuilt along the lines of the original design by John McComb, Jr. This design, together with a reproduction of other of the original drawings, will be found illustrated in THE AMERICAN ARCHITECT, issue of Feb. 5, 1908. The New York *Tribune*, in an editorial printed the day after the fire, voices, we believe, the sentiment of every architect in New York, if not in every section of this country. It states:

"Our debt to the City Hall in this world of sin and ugly buildings is very great. Through all our dark years of excavation and wreckage and atrocity, she has somehow contrived to maintain our faith in a New York of the future, not utterly perfect and beautiful, for that would not be New York, but in a New York in which grace and beauty had measurably triumphed.

"We accordingly say a prayer of thankfulness that the fire of yesterday did not do more than scorch her headgear, and that Justice still stands. Luck and charm evidently go together. Not a single painting or decoration entrusted to the Hall's keeping was damaged.

"Why not, as a reward for so much fidelity and in token of our general appreciation of beauty and grace, why not, at last do our duty and persuade the United States of America to remove, abolish and destroy that hideous Federal building which has confronted the City Hall these many years? How the City Hall could smile and smile with such an eye-sore for its daily outlook, we never could understand. Why not demonstrate that we deserve our luck?"

If, in view of the slight damage to the building, the menace of its possible destruction will, we hope, direct the attention of Congress to its rare architectural beauties, and induce it to order the removal of the unsightly Post Office building that mars its surroundings, we shall agree with the *Tribune* that we really "deserve our luck."

New York Society of Architects

The annual meeting of this society, held on May 15, in the United Engineering Society's Building, New York, was made the occasion of a celebration of the tenth anniversary of the incorporation of this society. There was a record attendance of members and guests. Addresses were made by President J. Riely Gordon; Fire Commissioner Robert P. Adamson, on "Fire Prevention;" State Industrial Commissioner Henry D. Sayre; Rudolph P. Miller, chairman Board of Standards and Appeals; William J. Millard, Assistant Corporation Counsel, on "Bureau of Penalties;" Tenement House Commissioner John J. Murphy; Mr. William P. Bannister, Secretary State Board for Registration of Architects; Mr. Robert D. Kohn on proposed State Building Code; Mr. Edwin Q. Bell, formerly real estate editor New York *Herald;* Mr. Hugh Getty, president Building Trades and Employers' Association; and Major Everett on "Legal Relation of Architects, Client and Contractor."

The following officers were elected: James Riely Gordon, president (re-elected); Adam E. Fischer, first vice-president; Edward W. Loth of Troy, N. Y., second vice-president; Henry Holder, treasurer; William T. Towner, secretary, re-elected; Edward Wehrlin, financial secretary.

The business meeting was followed by a dinner and theater party.

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DETAIL OF PORTICO

ALTERATIONS TO HOUSE OF EDWARD C. DELAFIELD, ESQ., RIVERDALE-ON-HUDSON, NEW YORK.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, MAY 30, 1917 NUMBER 2162

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COTTAGES AT CHILMARK.

The Geometry of Five Valleys

BY P. M. STRATTON, A. R. I. B. A.

Illustrated by Sketches by the Author

FIVE valleys, each known by the name of its river, converge and join within a radius of two miles of Salisbury; they are, in order, the Bourne, the Avon, the Wily, the Nadder, the Ebble. They have the same general characteristics: a boundary on each side of downs, along whose ridges runs a green road for the one-time traffic of Salisbury Plain, the ancient center of England. From the old turf of the downs, and interrupted by a few grass-clad bluffs, long slopes run towards the stream; these are very fertile arable land, locally known as "Bakes"; next and before the stream can be reached there is a white road hedged and fringed with aspen and elm, and then the stream with water-meadows, and on the further side of the latter a backwater, with all between divided geometrically by little canals. Each farm has its hatches on the main stream, so that the "drowner" may dam up the water and force it into subsidiary ditches, each of which again has its hatch. From the edges of the ditches the ground slopes away for the overflowing water to "drown" the whole meadow, the surplus thereafter collecting in the gutter formed by the pair of slopes and running away down a channel to the main stream.

The villages as well as the meadows have a typical plan, which is to be seen to-day in various stages of development. Apparently the oldest roads are certain of those transverse to the valleys through the fords, giving communication from one ridge of the

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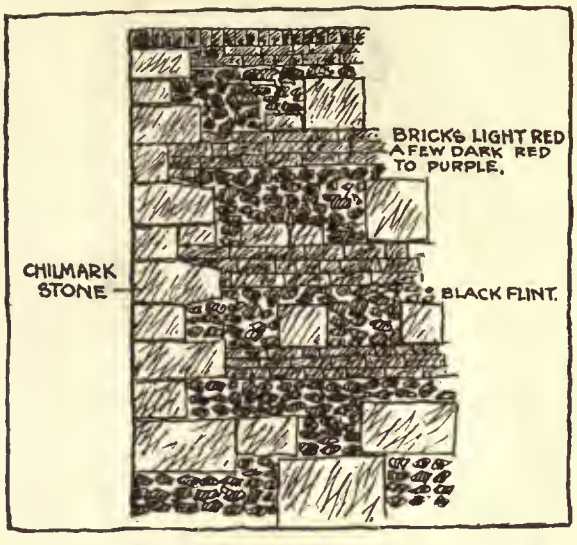
downs to the other, then as the swamps receded the fertility of the lower slopes became known, and settlements were formed to work them and to obtain the fish and wildfowl from the stream. The next development was to link up these hamlets by the parallel roads on each side of the valley, for a single road did not give enough service in that bridgeless time; finally the number of transverse roads was increased and the streams bridged to correspond. The lesser villages to-day have one cross road and the larger have two, so that a fully grown hamlet is an oblong cut through by the stream, which beyond debouches into the water meadows.

The downs now are only the green cemetery of their civilization, of which their turf-clad tombs and crumbled camps are monuments, and the grass has covered most of their roads as well. The roads of



WALL AT HARNHAM.

the valleys therefore exist for the sake of the villages, and each house has a claim upon them, so different from the line of straggling buildings along the highway between one important town and another. But here is the character of completeness, the sense of security little disturbed by alien traffic.

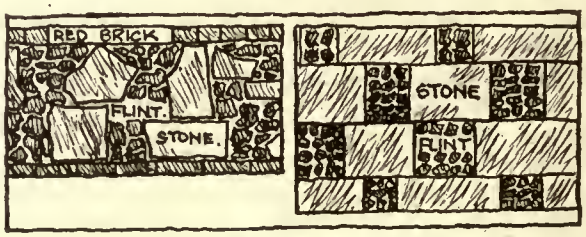
Very many are the villages along the banks of the five rivers; yet their dwellings might almost all have been the work of one man provided with a sober fancy and given few needs to satisfy. The materials were close at hand, stone from Tisbury and Chilmark, chalk from the nearest hill, straw from a wheatfield on the bake and untangled by the wind, and the elm and oak from the familiar hedgerow. Bricks and tiles came in later times from Salisbury, but they have not quite the same native beauty as the other materials, and Welsh slates have got there—all "cheap and nasty." The walls most characteristic of the valleys are of chalk and straw, and are made as follows: In the good haymaking weather of warm and windy days, having excavated to the hard chalk bottom, and prepared shuttering to contain walls 18 in. to 24 in. thick, mix chalk and straw with water into a glutinous mess and lay it

COOMBE BISSETT

in layers of 9 in. in height, and between put layers of long straw, each layer to be rammed, and as it dries proceed with the next. Clean and sharp road scrapings may be added to the chalk. These walls show in some cases the least wealthy builders, in others the oldest dwellings. Here and there gashes have been made in the material by the frost, and the looser internal rubble having dried, seems in danger of running out. A patch of new skin shows where such a fault has been stopped.

Other walls, more costly, are built of stone, others again of stone and flint arranged checkerwise or in more subtle variation, as in the wall at Harnham illustrated, where bricks have been added, and in the company of such gray cool color retain the glow of their calcination. A favorite play of color was between a dull red of bricks and a more mellow red of tiles hung perpendicularly on timber framing with half of the courses scalloped or zigzagged, or dancetty, as heraldry prettily terms it, as in the farmhouse at Odstock.

The damp warm air of the valleys seems truly to breed silver lichen out of its own silver rain,



WALLS AT NETHERHAMPTON.

and even the alien material of slate is threaded by it into a gray harmony. It grows on the white chalk walls and creeps from the joints of the flints, some of which are black and some white, though a different white to the mortar joints, and all the rest a tone of clean and brilliant gray, and the stone is the purest and the softest gray, each stone a little field of lichen; the thatch is dark gray dappled with green moss and lighted, too, with lichen.

These builders loved wall-space both for its own sake and as a surface for the display of color. They did not understand veneer or any applied coating of decoration, for the skin to mud-walled cottages was a structural necessity, but they built in color. They said this gray stone shall support these black flints, which in turn shall bear this square white lump of chalk. And later they brought their red bricks up the valleys with a little of the stir, one imagines,

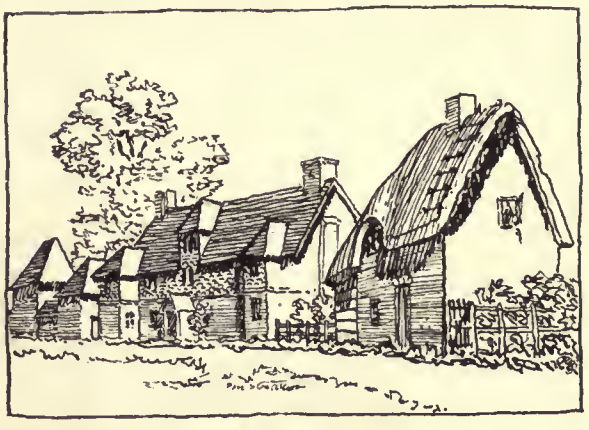
FARMHOUSE NEAR WILTON.

with which the Italians received a new picture, and embodied this bright new material in their decorative construction. The very windows and doors seem smaller than those of the buildings in other parts, so wide a sway does the wall surface hold. Above, bare of trees, shaven close by the feeding sheep, windswept, unvaried in recurrent flutings of turf, the surfaces of the downs are a mosaic of tiny flowers, violet, milkwort in three colors, wild thyme, spotted orchids, birdsfoot trefoil. The smallness of their scale enables them to so intertwine with one another as if they were embracing; the effect of their infinite small beauty covering the austere downs is a poignant sweetness, which the craftsmen of the valleys felt and which enticed them into their own particular style of design, wide surfaces of many materials interlaced.

The strata of thatch on the cottages become indistinguishable in two years from the date of a new layer, but the eaves project far enough to betoken a great age to the roofs. There are few gables, for nearly every corner and angle is rounded, and the valleys that would be left by the sides of dormer windows are filled up with straw. Thus curves are formed in the thatch, and the roof outlines are here like the edges of the downs against the sky, or there

COTTAGE AT HARNHAM.

are more fully rounded like the great elm tops of the valleys. Gradations of light and shade define the curves in the roof as well as those of the downs, but the former are tender, the latter austere. The horizon seen from many a window is one curve, clear cut to hardness, subtle in outline, vast in length. Indeed it is a peculiarity of these hills often to seem more architectural than the buildings,



ODSTOCK

molded as they are with the severity and refinement of the Greeks; or they lie like great columns three parts submerged and covered with green turf. The atmosphere is so clear and the outlines so vividly defined that there is a feeling of absolute reality, as if the earth and sky were asserting a will to live, not

blatantly, but by the purity and sweetness of the conditions of their existence. There is beyond that a combative strength to the lines of the downs, as though they were long ramparts thrown forward against that other land, that country of vague dreams and phantasmagoria, and the heaped formlessness of the mystagogue. Here, if the imagination be excited, it is to think of the structure of the earth being still further molded into architectural forms; that these buried pillar shapes of the downs shall be set up to the sides of each valley forming long aisles converging to Salisbury, and that behind them shall be built the flat walls in layer upon layer of brightly decorated earth. The thought comes of the pillars being connected by lintels of the level low clouds forever stationary, and of a vault springing from them, whose voussoirs are checkers of blue and pearl gray, interrupted only by the golden boss of the sun and the silver shield of the moon and the glinting flints of the stars.

It was by such thought of the universe as a thing of inherent structure that the builders of these five valleys have been conditioned in their design, and in their work have been able to express a beauty akin to nature's, because it is unconscious. For this shepherds' architecture seems not to stand on the soil, but indeed to be part of it, and these little cottages its shapely hills.

National Fire Protection Association

AT the recent convention of the National Fire Protection Association, held in Boston, May 8, 9 and 10, many reports were submitted bearing on topics of interest to architects. Copies of these reports may be had by application to the secretary of the association, Franklin H. Wentworth, Boston, Mass.

The Committee on Nomenclature recommends the discontinuance of the use of the word Fireproof. The report as submitted states:

> This general term has been erroneously applied to buildings and materials of a more or less fire-resistive or incombustible nature. Its indiscriminate use has produced much misunderstanding, and has often engendered a feeling of security entirely unwarranted.

In order to insure technical accuracy and a proper orismology the following are also particularly defined:

Fire-resistive.—The term "Fire-resistive" applies to materials and constructions which will satisfactorily resist fire in accordance with the specification established by the Joint Conference on Fire Tests.

Incombustible.—The term "Incombustible" applies to materials and constructions which will not ignite when subjected to ordinary fire.

Non-inflammable.—The term "Non-inflammable" applies to materials and constructions which will ignite but will not support flame when subjected to ordinary fire.

The report of the Committee on Uses of Wood in Building Construction has special reference to the revised specifications for mill construction.

This type of construction is defined as follows:

> "Mill" or "Slow Burning" construction consists of substantial masonry walls and heavy timber interior construction so designed and arranged as to avoid concealed spaces and to expose the least number of corners or projections.
>
> NOTE.—Buildings of "Mill" or "Slow Burning" construction should have each floor or room isolated by means of incombustible walls, partitions, approved automatic fire doors and other cut-offs to prevent the rapid spread of fire and smoke. Buildings of this type should be protected against fire with standpipe or automatic sprinklers or a combination of both.

The report further states:

> Area of any floor between fire walls or exterior walls in mill buildings shall be as follows:

Fronting on	*Without Sprinklers.*	*With Sprinklers.*
One Street	6,500	13,000
Two Streets	8,000	16,000
Three or More Streets	10,000	20,000

> NOTE.—Area of floors in buildings 3 stories or less in height, sprinklered and with non-hazardous occupancy, may be increased.
>
> The area of floors in buildings more than 3 stories in height and of extra hazardous occupancy and not sprinklered shall be materially reduced.
>
> The minimum width of streets shall be 60 feet for unsprinklered buildings and 16 feet for sprinklered buildings.
>
> The height of buildings shall not exceed 5 stories or 65 feet non-sprinklered, nor 6 stories or 75 feet sprinklered, above average ground level.

An important report is that of the Committee on Safety to Life. This suggests number of occupants based on stair capacity, emptying time, the basis for the tabulation and its development.

Pennsylvania State Association of Architects

The annual convention of the Pennsylvania State Association of Architects was held at the Bolton Hotel May 14th, delegates from each of the chapters in the State being present.

The bill recently introduced into the legislature, providing for the licensing of architects was endorsed, while the specifications on Portland cement and structural steel for buildings as prepared by the American Society for Testing Materials were recommended for general adoption.

The association pledged itself to conduct an investigation among the presidents of the thirty-seven universities of the United States conferring degrees in architecture, on their attitude towards conducting popular lectures on the subject of architecture, and on other ways and means calculated to make architecture a part of a liberal education.

The following officers were elected: Albert Kelsey, Philadelphia, president; F. A. Russell, Pittsburgh, vice-president; W. L. Black, Philadelphia, secretary; M. I. Kast, Harrisburg, treasurer.

Southern California Chapter, A. J. A.

At the regular monthly meeting of the chapter, held on May 8, it was decided to award three medals of honor each year for meritorious work. The chapter has prepared and submitted to the City Council a city planning ordinance which, it is stated, will probably be favorably reported and passed. The chapter has unanimously declared its purpose to offer the services of all of its members for such war emergency work as it might be called on to supply. No further meetings will be held until next September.

Pennsylvania State Housing Association

The annual conference of the Pennsylvania State Housing Association will be held in Pittsburgh, June 8th, 9th and 10th. A large number of delegates from all over the state is expected, and many matters of great importance will be discussed at the various sessions of the conference.

The Atlanta Fire

Damage amounting to approximately five million dollars and 20,000 persons probably rendered homeless, is the result of a fire that swept the residence section of Atlanta, Ga., on May 21st. Newspaper reports state that upward of 100 blocks were swept by the conflagration, to which must be added the many blocks dynamited to arrest the progress of the flames. The various investigations now being held as to the origin of the fire, and the causes that contributed to its rapid spread over a large area, will add another chapter to the already lengthy history of similar holocausts in this country. The large money loss will swell an already enormous total thus far this year.

U. P. C. Book Company

Starting with the Georgian Period, first published twenty years ago, and now become a classic of architectural literature, and extending through a long series of monographs and books on special topics, THE AMERICAN ARCHITECT has from the outset been publishers of standard architectural works. In addition, it has through its book department supplied every available book of other publishers, in quantities from a single copy to complete architects' working libraries.

This department of THE AMERICAN ARCHITECT, together with similar departments of other publications with which it is affiliated, has grown to such proportions that in order to increase the value of its services to architects and add to its working efficiency it has been decided to incorporate under the title of U. P. C. Book Company a combination of these various departments of all the eighteen technical and trade periodicals belonging to the United Publishers Corporation.

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The American Federation of Arts

The annual convention of the American Federation of Arts came to an interesting and successful close with its annual dinner in Washington on May 19th. Addresses were made by Robert W. DeForest, the president of the Federation, who urged that all art museums and institutes should by all means be kept open during the war.

The growth of art, and the art of sculpture, especially in America, during recent years, were discussed by Hermon A. MacNeil, past president of the National Sculpture Society.

Book Review

THE LIVABLE HOUSE, ITS PLAN AND DESIGN. By Aymar Embury II. Stiff paper bound, 198 pages, size 7 by 10 inches, price $2.50. New York, Moffat, Yard & Co.

That there is a popular demand for a book of this character indicates, as the author states in his introduction, "a very gratifying illustration of the growth of public taste." When a work of this nature is undertaken by an architect who has produced a large number of "livable houses" the words he sets down to guide the prospective home-builder may be considered reliable and helpful in the highest degree. In fact, a work so well carried out in a sense places architects under an obligation, as a client who has carefully read this text and with equal care studied the many accompanying illustrations will be better prepared to accept the advice of his architect, and be guided by his judgment. While this book has been prepared primarily for the layman, it will have considerable suggestive value to architects, as the author has, with good judgment, selected nearly a hundred illustrations of houses and their plans that present every good type to be found in this country for the past century.

A Housing Measure to Aid Building

A measure recently introduced in the Illinois General Assembly should, if passed, stimulate the erection of dwellings to a remarkable extent. The bill provides that any number of persons, not less than ten, may form a corporation to own land for the purpose of subdivision into city or village lots, which lots may be sold without improvement as residence lots or may be improved by the company by the erection of residences thereon and sold by said company. It further provides that lots shall not be held longer than five years without being improved, and that the improvement must be double the value of the lots. If lots are held longer than this period without the expenditure stipulated, the state's attorney is authorized to file information in court against such corporation, and the court shall have the right to order the sale of the same.

Bela L. Pratt, Sculptor, Dead

Bela L. Pratt, the sculptor, died May 17th, at his residence in the suburbs of Boston. Mr. Pratt was in his fiftieth year.

Probably no one man has been more prominently and usefully identified with the rise and progress of American sculpture than had Mr. Pratt. He was not only identified with every movement looking to the upholding of his art, but on every occasion where the sculptor was called on to contribute his work on great occasions, Mr. Pratt gave the best that he had.

The Boston *Evening Transcript* in a long obituary notice of Mr. Pratt states:

"Assignment of Mr. Pratt to his particular niche in the American Hall of Fame is still somewhat difficult. It is certain, at least, that he will long demand a large chapter in any history that shall be written of American sculpture if only because he so admirably expressed the liking of the best people in this nation for reserved understatement and a certain degree of repression."

English Details No. 1

STAIRCASE FROM SLAUGHAM PLACE, SUSSEX

THIS handsome staircase came from Slaugham Place, the seat of Sir Walter Covert, whose estates extended, says tradition, "from Southwark to the Sea." According to the testimony of natives of the district, as late as the middle of the 18th century, "the family at Slaugham Park consisted of seventy persons."

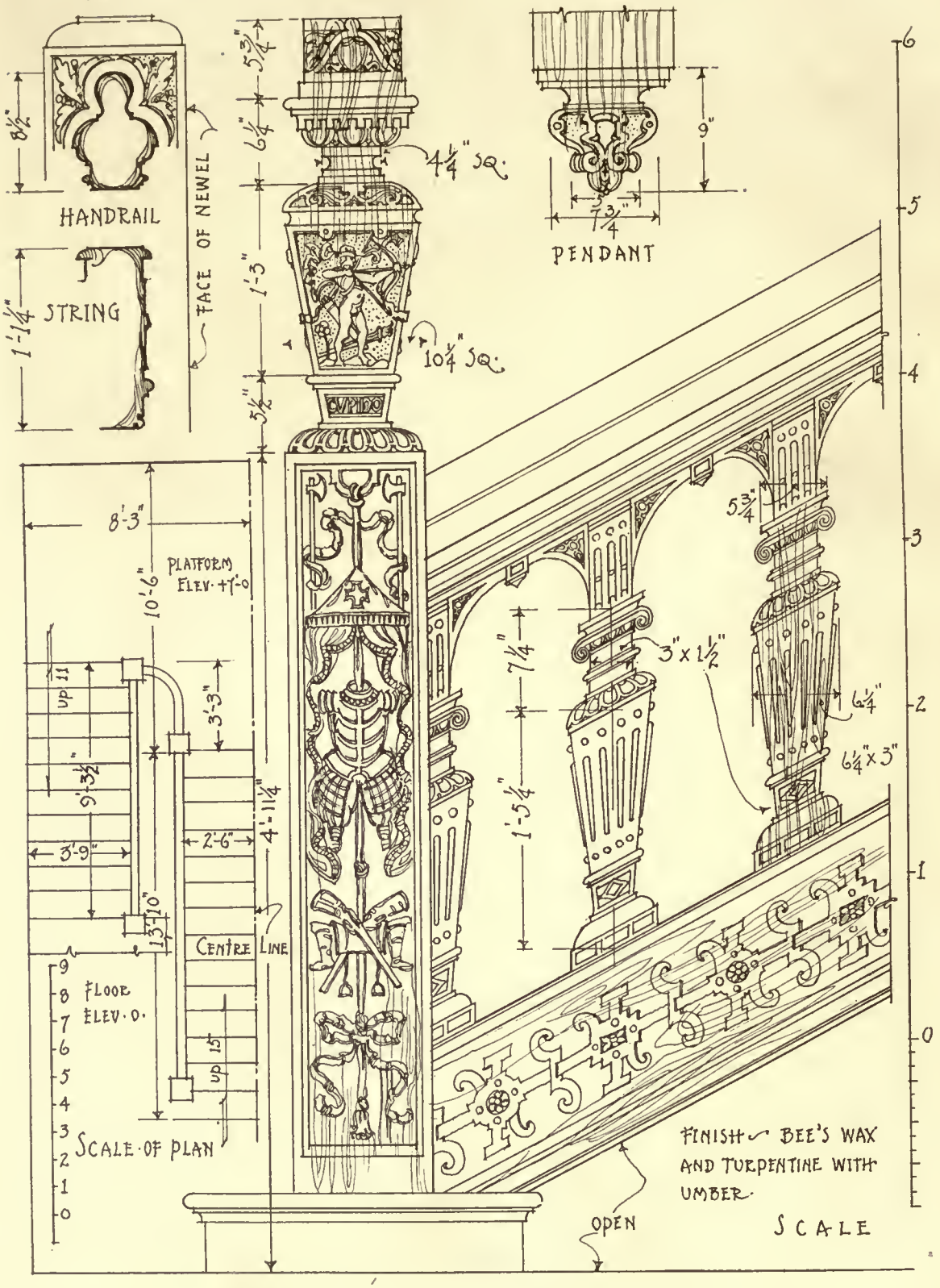
"The fluted pilasters in three heights, the coffered soffits of the arches and the elaborate heraldry give some slight idea of the beauty and magnificence that has disappeared." Continuing, Gotch says: "Of the actual remains left the principal features are the kitchen and pastry fireplaces, the porch to the hall, three arches of the arcade on the right, or north side and two of those at the lower or east end of the courtyard. The extent of the gardens can also be traced, and the moat which surrounded the whole is still partly visible. The house was pulled down in the last century, and the fine old oak staircase, an elaborate example of the period, was removed to the Star Inn at Lewes."

The staircase now adorns the Town Hall, where by the addition of new newels and balusters it has been made to fit its new location. The detail is particularly interesting. Panels representing the elements, the five senses, the three great continents, Asia, Afric, and Europa (no mention of America), Ceres, Bachvs, Jvstice and Cvpido, decorate the newel posts and finials. It is built of oak and has a rich brown color. The newer parts were finished with bee's-wax, turpentine and umber, and admirably match the old work.

STAIRCASE, SLAUGHAM PLACE, SUSSEX

DRAWINGS AND PHOTOGRAPHS
BY WALTER G. THOMAS

ENGLISH DETAILS
NO. 1

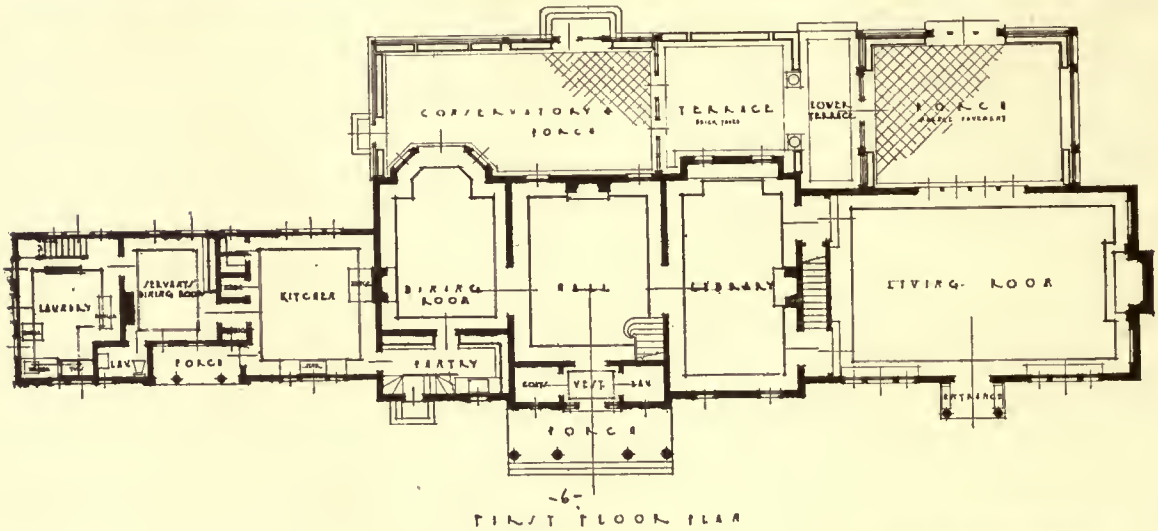


STAIRCASE, SLAUGHAM PLACE, SUSSEX

DRAWINGS AND PHOTOGRAPHS BY WALTER G. THOMAS

ENGLISH DETAILS NO. 1

SOUTH WING



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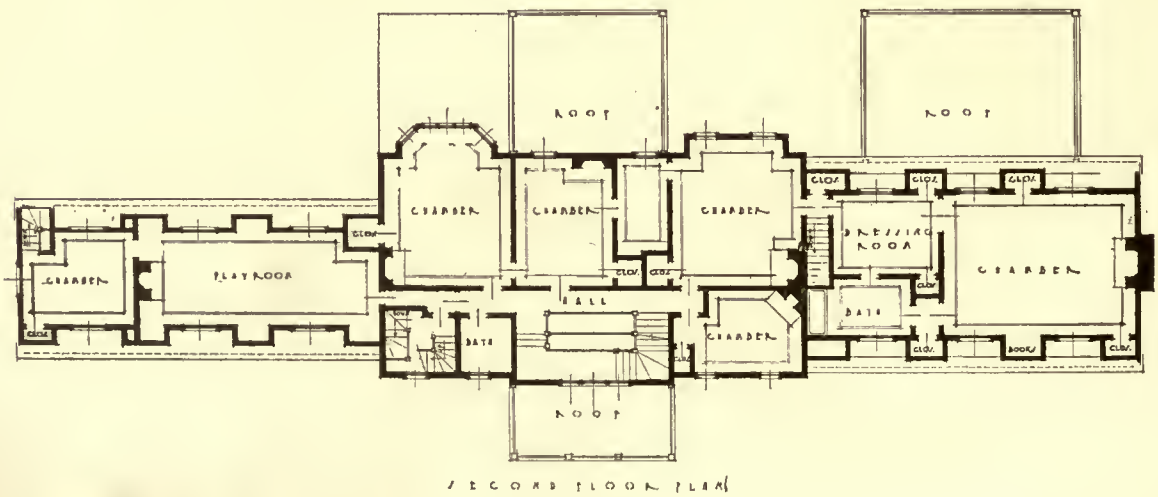
FIRST FLOOR PLAN



SECOND FLOOR PLAN

ALTERATIONS TO HOUSE OF EDWARD C. DELAFIELD, ESQ., RIVERDALE-ON-HUDSON, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

THE OLD AND THE NEW WEST FRONT

ALTERATIONS TO HOUSE OF EDWARD C. DELAFIELD, ESQ., RIVERDALE-ON-HUDSON, N. Y.

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OLD AND NEW EAST FRONT AND NORTH WING

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DETAIL OF ENTRANCE, EAST FRONT

ALTERATIONS TO HOUSE OF EDWARD C. DELAFIELD, ESQ., RIVERDALE-ON-HUDSON, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

THE NEW LIVING ROOM

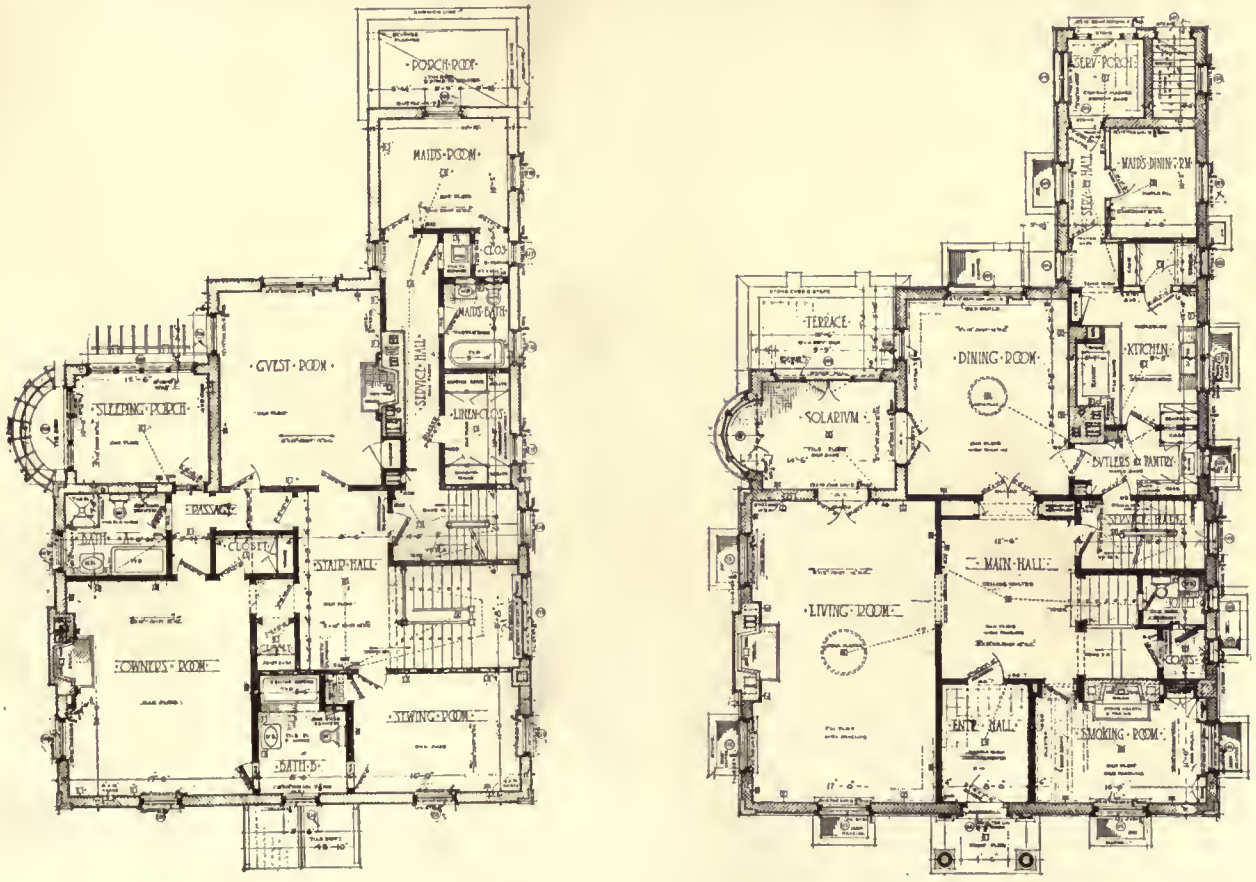
ALTERATIONS TO HOUSE OF EDWARD C. DELAFIELD, ESQ., RIVERDALE-ON-HUDSON, N. Y.

MR. DWIGHT JAMES BAUM, *ARCHITECT*

HOUSE OF WILLIAM E. CURRIE, ESQ., DETROIT, MICH.

MESSRS. PRESTON, BROWN & WALKER, *ARCHITECTS*

MANTEL IN OWNER'S ROOM



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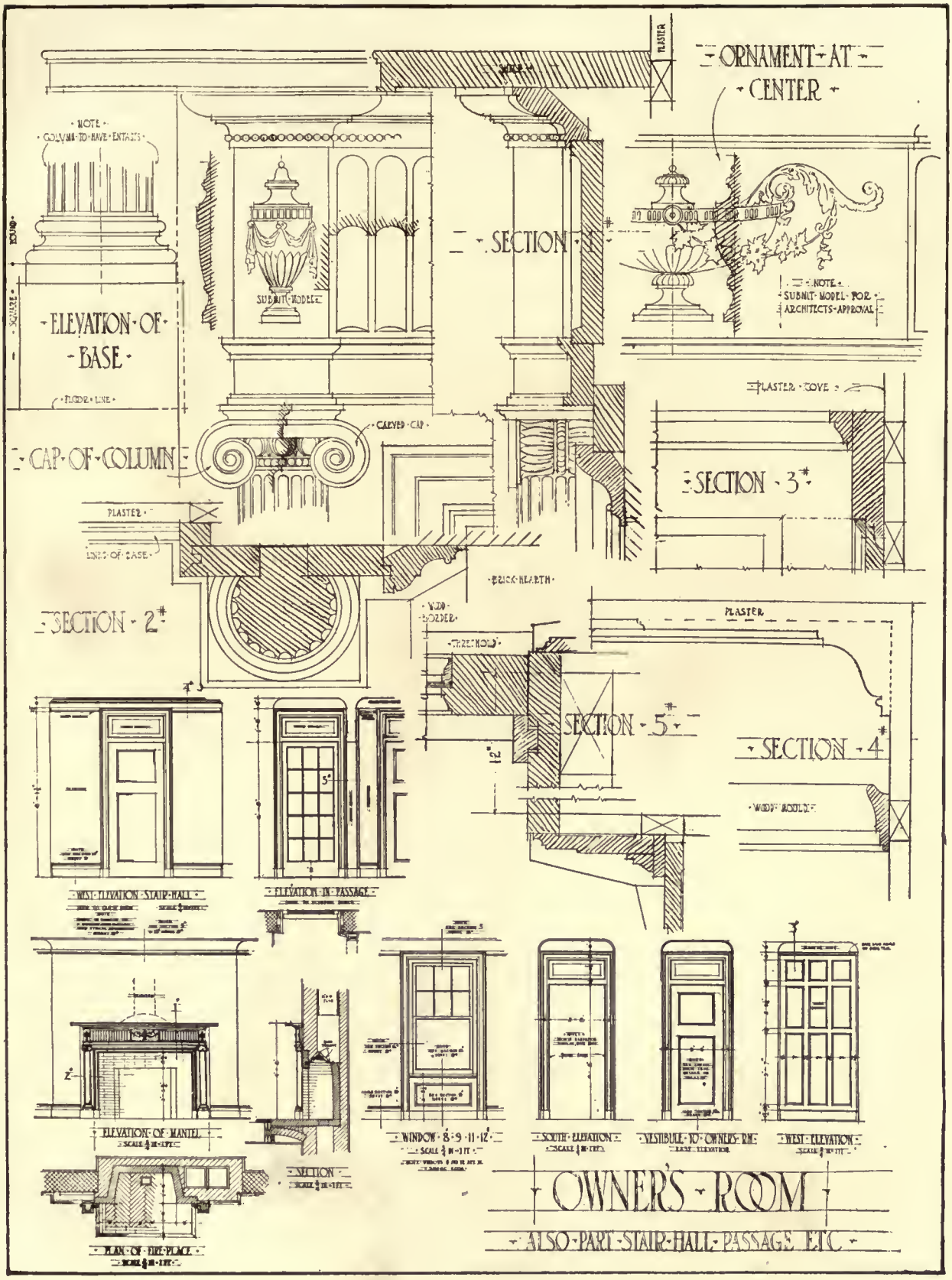

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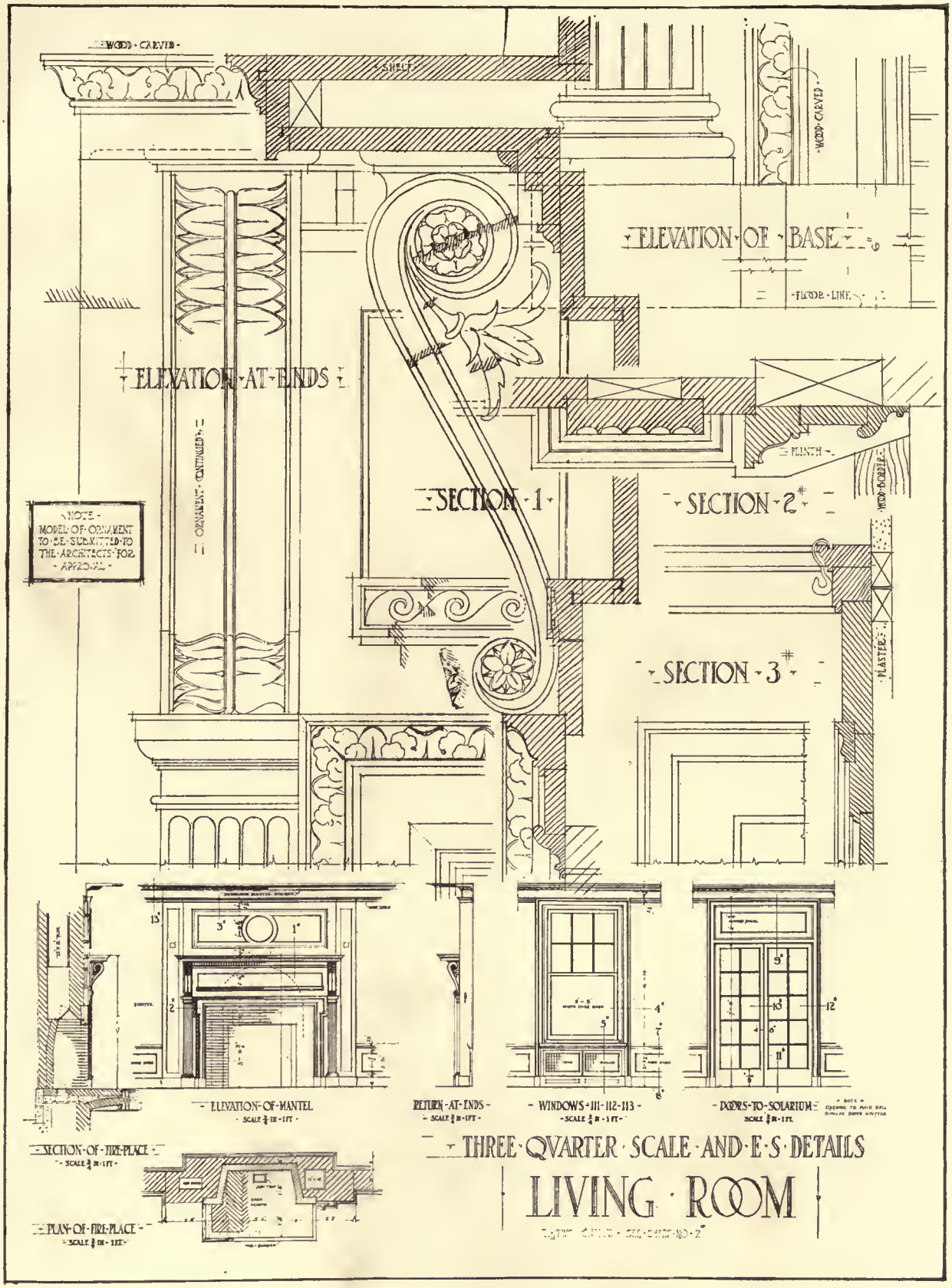
WOOD · CARVED
SHELF
WOOD · CARVED
ELEVATION · OF · BASE
FLOOR · LINE
ELEVATION · AT · ENDS
ORNAMENT · CONTINUED
PLINTH
WOOD · BORDER
SECTION · 1
SECTION · 2
NOTE · MODEL OF ORNAMENT TO BE SUBMITTED TO THE ARCHITECTS FOR APPROVAL
SECTION · 3
PLASTER
ELEVATION · OF · MANTEL
RETURN · AT · ENDS
WINDOWS · 111 · 112 · 113
DOORS · TO · SOLARIUM
SECTION · OF · FIRE-PLACE
PLAN · OF · FIRE-PLACE
THREE · QVARTER · SCALE · AND · E · S · DETAILS
LIVING · ROOM

HOUSE OF WILLIAM E. CURRIE, ESQ., DETROIT, MICH.

MESSRS. PRESTON, BROWN & WALKER, *ARCHITECTS*

OVERLAND SERVICE STATION, BOSTON, MASS.

MESSRS. MILLS, RHINES, BELLMAN & NORDHOFF, *ARCHITECTS*

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VOL. CXI MAY 30, 1917 No. 2162

Whitney Warren's Report on Rheims Cathedral

THE rebuilding of "much harried Belgium" is a topic that is absorbing considerable space in the French and English architectural press. The French Government is having made a thorough survey of present conditions. A correspondent to the New York *Times* gives an interesting account of a recent visit to Rheims, in company with Whitney Warren, who has been called upon by the French Government to give professional study to the present condition of the cathedral. Mr. Warren, in summing up his findings, states:

"The cathedral is now in grave danger of total destruction. In the recent bombardment seven of the flying buttresses were shot away, so that the walls, particularly those of the transept, are so weak that just one chance shot would bring all that portion of the building tumbling down. The walls are full of cracks, and are really just hanging together, depending only on the thin iron supports inserted through them. Considering the entire cathedral, I would say that probably three such chance shots or possibly half a dozen would raze it to the ground.

"With the loss of the flying buttresses the pressure of the other supports has become so great against the other walls that they are bulging out. New cracks are appearing constantly, so that the vicinity of the cathedral is very unsafe. It could be saved if no more shells hit it. I don't mean it could be restored. It is too badly smashed ever to be restored, except in spots. What I mean is it could be preserved as it is—a wonderful and inspiring ruin, quite as magnificent in its way as the Roman Colosseum. No matter what further destruction occurs it seems to me it should be kept simply as a ruin."

We hope that Mr. Warren's suggestion will find favor and that not only will there be no attempt to restore this magnificent structure, but that others, of great importance, which have suffered in a similar manner, will be treated in a way that would make them the most dignified war memorials that could be devised.

These ruins, preserved in all their grandeur, would be as Mr. Warren states fully as inspiring as the Colosseum, and the lessons they would teach to posterity most impressive and lasting.

The spectacle presented by this devastation should be allowed to remain. The preservation of these buildings as historic lessons is strongly to be recommended.

To Maintain Normal Conditions

THE Boston *Post* urges the city of Boston and State of Massachusetts to discontinue during the coming summer all construction work not absolutely necessary. It states that private employment will no doubt be able to absorb all the labor anywhere available and will pay more than the customary wages.

To stop at this juncture industrial activity of any kind, especially the operations of building on the part of States or municipalities, would, as indicated by a very widespread and almost unanimous opinion, be a dangerous procedure.

At the outbreak of the war the English Parliament was disposed to recede from many building projects that had been decided on. This action raised a storm of protest on every hand. It was believed necessary to the welfare of all classes that there should be no cessation of normal building operation, and it was the general opinion that the Government should be the one to set the proper example, as it was vital to the public welfare and the maintenance of a proper equilibrium that there should be no diminution of public building.

The experience of England in this direction would seem to indicate to us that the surest way to preserve American prosperity is to do all that we can, each to the extent of our individual ability, toward the maintenance of normal industrial, commercial and social activity. We have now as a nation entered into an agreement to do our full part in the war in which we are engaged. Any tendency

likely to cause a feeling of apprehension among the people will only serve to promote insecurity. To avoid this tendency, to stimulate the feeling of optimism, it is of the utmost importance that in every industry there may be no diminution of commercial activity, no slowing up to an extent that would serve to bring the people to a state of apprehension that might easily border on panic.

With the drain in foodstuffs, likely to ensue as the result of our agreement to ship large quantities abroad, we shall have to see to it that the production is increased and, what is of even greater importance, that waste is reduced to the lowest minimum.

We shall also need to carry to completion the building operations already under way, and that there may be no slacking up, to start operations of projects heretofore but tentatively considered, and to continue as part of the "bit" by those who cannot engage in the actual conflict every activity that will add to our resources and conserve every shred of strength we have as a nation.

"Stored Knowledge"

THERE has been much discussion as to how to infuse new life into architecture so as to raise it to a higher level and develop in this country a type that shall be distinctively American. Architects have been told by critics (most of them not architects) that present day work lacks originality. Other critics have urged that there should be a more intelligent "borrowing," and that, while, of course, it is undesirable to borrow from immature work, it is perfectly legitimate to adopt any good form that may suit the purpose.

Assuming that "borrowing" is a perfectly legitimate proceeding, it would not be correct to also contend that architects would be justified in copying. There is a very wide and plain distinction. A "borrowed" idea can be permissible only when the borrower has simply taken it as a germ and built upon it a design to which he has added his own individual ideas. The success of his efforts will of course depend on how well he has mastered the subject from which he is working. The ability to take any motive and build upon it a successful design is identical with the ability to select a text, a topic or a plot, and construct a successful literary effort, and this ability is entirely dependent on the store of knowledge at one's command. It is not all that we have seen and read that will serve our purpose, but what we have remembered. The whole thing, therefore, is simply one of training the memory to retain certain impressions, so that when we have use for them we can readily draw upon our knowledge for our needs. This faculty for training the memory in art has been one always recognized as essential by teachers, but it has by no one been more successfully urged than by Lecoq de Boisbandran, who, in 1863, was authorized by the Academie des Beaux Arts of Paris to employ his own methods of teaching, and to open a class for memory training at the Ecole Imperiale, of which school he eventually became the head. He died in 1897. Among his pupils and artists who indorsed his methods were Viollet le Duc, Puvis de Chavannes, Cazin and Whistler.

Boisbandran's contention that memory was but "stored knowledge" was the fundamental idea of his teaching. He ignored the conventional methods of sketching, and in fact would never allow any of his pupils to make even a written note of their observations. When a pupil had selected a subject, either a picture for example at the Louvre or some bit of landscape afield, he was directed to study it and observe it as closely as he could. Then, when he had returned to the atelier, he was to take his canvas or board and set down all that he could remember. Frequent visits were necessary before the pupil had exhausted all the possibilities of his subject, but when finally completed it will be fair to assume that he had a very wide knowledge and had impressed many valuable facts on his memory.

This method in a greater or less, probably less, degree is being followed to-day, but there is ever a tendency to rely on sketches made on the spot. These give an impression of a subject at the time made. By the manner taught by Boisbandran, the pupil had a complete knowledge of his subject based on his observation in varying light conditions, and oftentimes in varying seasons. The modern designer, who must needs rely wholly on sketches or other suggestive material, will always realize his limitations. It is the man who has a vast amount of "stored knowledge" at his command that will excel. It therefore seems, to again refer to the question of the infusion of new life into architectural design, that at least one good and helpful method would be to impress on students at our architectural schools the great value of a trained power of observation and its development without the assistance of any mechanical help.

EAST FRONT

Alterations to House of Edward C. Delafield, Esq.

Riverdale-On-Hudson, N. Y.

MR. DWIGHT JAMES BAUM, *Architect*

ALTERATIONS, as a rule, have significance only as modernizing or adapting to present-day requirements a dwelling that has lapsed to desuetude. In setting about the alterations to the Delafield house the architect not only had to consider the traditions of a house whose occupants and their ancestors have been living on the site for over a century, but to impart to a location that was identified with the opening scenes of the Revolution some of the architectural significance of its particular section.

The site is just above the historic Spuyten Duyvil, and the house located on the crest of a ridge about 500′ ft. from the banks of the Hudson, which is reached by a natural slope. The section is the only one near Manhattan that has retained its virgin forests and has isolated itself from the surrounding growth and fast-increasing population. The site owned by the Delafield family embraces approximately 200 acres and represents one of the few large estates in the district. About 75 acres are devoted to the homes of the different members of the direct family, while the greater portion is being developed as a select residential community.

The general appearance of the exterior before alterations may be seen in the photographs of the east and west fronts. The first operation in the redevelopment of this house was the addition of a north wing. This wing has a living room 20 x 40, with owner's suite above. It has a separate entrance on the eastern side, and may therefore be used for entertaining independent of the main house. Opposite to this entrance are large folding glass doors, leading out to a sun porch overlooking the river. These doors are designed so that at any time they all may be opened, including the transoms, and the main frame then forms a proscenium arch and the porch becomes a stage, with the main room as the auditorium. Special lighting has been arranged for the footlights, etc. The doors, folding back, form small dressing rooms. On either side of the entrance door on the east are bookcases with grouped windows above, and on the north end of the room a large fireplace, in which a 6-ft. log may be burned, is framed on either side by bookshelves, rising to the ceiling. This fireplace has a German Formosa facing and hearth, and gives an interesting color note in the room. Floors of quartered oak are

laid herringbone, and the walls are panelled to the ceiling. All the woodwork is of red gum, left natural, while the ceiling is of ornamental plaster in low relief, arranged with thirty-five coffers, the center husk of each holding a small electric bulb. After much figuring the architect arranged this ceiling lighting, which is used only during entertainments, into five circuits, each circuit lighting a symmetrical number of lamps.

The period of design of this room is the later English renaissance. The bookcases on the east wall have silent action sliding and leaded doors. The center of the leading is touched out with the family crest on stained glass. The walls are all panelled, the principal openings being framed with fluted pilasters supporting a dentilled wood cornice. The simple panels are arranged to give restful wall surfaces, on the west and south. The west wall will eventually be covered by tapestries, while the south wall, which conceals the owner's stairs to the suite above, holds a portrait of John Bigelow, a relative of the family, painted by John Singer Sargent. Provisions have been made for the lighting of these tapestries and pictures by special lights in dull gilt fixtures, with slight decorations in color. The lighting brackets, of which there are sixteen, the table lamps and standards, are of special design carved in wood and finished in polychrome and gilt, after the old Italian manner. The shades are of parchment, and with the fixtures themselves, carry out the color scheme of the room. The half shades on the brackets have a design showing dog-wood trees in bloom. These attractive trees surround the house and are numerous in the neighborhood, and therefore this motif was selected. Furniture, which was chosen by the owner and the architect together, is of the simple comfortable type, kept very low to give length to the room, which effect it accomplishes.

DETAIL OF NORTH WING

Proceeding up the panelled stairway, one can either enter the main house or the new dressing room;

OWNER'S BEDROOM

this room, which opens into the master's bathroom or bedroom, is finished in red gumwood, left natural in the same way as in the living room. It has a 3-ft. wainscoting; part of the panels spring open at the touch, disclosing convenient storage place under the eaves, while other spaces hold radiators behind these grilles. The windows are of a patented casement variety, hinging at the center and sliding either way, making possible the catching of every stray breeze. These blinds are operated from the inside. All closets have sliding doors and built-in wardrobes with drawers, etc. The bathroom is tiled with a dull glazed tile; the room has a shower compartment. The bedroom has a barrel vaulted ceiling, and is finished, as are the other rooms in this wing, with pearl-gray walls, blending to a cream white at the center of the ceiling. The roof is covered with hand-hewed cypress shingles, dipped in a green stain, the hard spots not absorbing the stain, and therefore giving a pleasing variation in color. The exterior is of warm gray stucco over hollow tile construction, with a large local stone chimney on the north. The east entrance has a small porch with Doric columns and open-back seats on either side. The floor is paved with herringbone brick, with white cement borders. On the west there is a series of glass-enclosed porches, brick-paved terraces, and a glass conservatory. The terraces are all paved with herringbone brick, while the floors of the enclosed porches are white marble laid diagonally. Low-seat radiators painted white are placed around the glass surfaces, and these are made less conspicuous by flower boxes above placed on legs. The lighting fixtures have parchment domes tight against the panelled ceiling, the designs being cut out and colored silks showing through. All windows in the main hall and dining room were cut down and made into main doors, so there are now vistas in the two enclosed porches and conservatory from the new living room, hall and dining room. The porte cochere, which was too cramped for the modern automobile, was done away with. The shingle exterior with the white pilasters was covered with metal lath and finished with stucco matching the wings, while the south wing was rebuilt, adding a laundry and toilet room on the first floor besides a special room above. The pediment on the front of the house gave the architect an excuse for a columned two-story portico, so the lines of the pediment were retained and the old material used in the new work. The entrance to the vestibule was broadened by putting in a wide Dutch door with sidelights all treated and formed by delicate Corinthian pilasters and cornice above. The two

OWNER'S ROOM

small windows to the coat room and lavatory were made interesting spots by covering with wrought iron grilles set out from the building, causing interesting shadows to occur. The sidelights and railing above the cornice are also of wrought iron. The stair landing has added a pair of French doors, opening on a small balcony. The large columns supporting the pediment have specially designed caps with similar details as used in Georgian work. Ceiling of the portico is panelled and a large bronze lantern designed by the architect forms the central point of interest. All of the cornices of the main building were restudied, medallions and bed molding were added to obtain the character desired. In the old south wing it was required to keep the same walls, roof lines, etc. Cornice moldings were changed, the chimneys stuccoed, the roof was reshingled which gives the desired general effect.

The kitchen was given more ventilation and light by removing the double hung windows and adding the two tripled grouped windows. The old laundry was changed to a servants' dining room, and the wing was extended, nearly balancing the north in length. The new laundry on the end was equipped with copper boiler and gas stove for heating water and electric washer and motor, laundry tubs, electric ironer, etc., with provision for future mangle. At the south end there is an entrance from the laundry to a paved brick terrace for servants' use, which is to have an awning above and a balustrade formed by privet hedge on the three exposed sides. All of the service rooms have a gray composition floor with sanitary base, with walls and ceilings treated so that they can be washed down at regular intervals.

The Question of Open Stair Tenements

IMPORTANT ACTION BY BROOKLYN CHAPTER A. I. A.

For some years considerable interest has centered upon open stair tenements in the architectural profession and among various individuals and companies interested in the erection of tenement houses and the problem of economical housing of large numbers of families. The subject was originally taken up in connection with the Vanderbilt tenements in 1909 and very recently in the Proctor tenements in Cincinnati.

In New York the restrictions imposed by the Tenement House Law have made necessary the introduction of many unnecessary and uneconomical features in connection with the planning and construction of tenements to house tenants whose incomes restrict to the minimum their expenditures for rent. In the early buildings shafts were introduced, and in many of the later ones the floor space and the wall surfaces exposed to light and air have been used uneconomically and ineffectively, although efficient means providing light and ventilation may be had, just as healthful and beneficial to tenants. This was pointed out in resolutions passed by the New York Academy of Medicine on May 4, 1911, introduced by Dr. A. Jacobi and seconded by Dr. Herman Beggs.

The Brooklyn Chapter of the American Institute of Architects having had opportunities to review and study this problem as exemplified in the open stair tenements recently erected under the existing law and other types of existing tenements, and to compare them with what they might have been if some of the restrictions had not existed, have passed certain resolutions which should be of interest to all who may give attention to the matter of economical housing.

At a meeting held in March these resolutions were unanimously passed:

"WHEREAS limitations and restrictions imposed by the present Tenement House Law tend to increase cost of living by causing unnecessary expense in construction, and uneconomical planning of tenements, and

"WHEREAS, among the restrictions imposed is the one which makes the open air staircase plan less effective and not economical in arrangement of space by prohibiting the lighting and ventilating of toilets and bath rooms on the open stair court recess.

"BE IT RESOLVED that the Brooklyn Chapter A.I.A. considers that there is no valid objection to this arrangement of plan and therefore gives its support to a movement which may tend to the elimination of this restriction.

"BE IT FURTHER RESOLVED that a copy of this resolution be forwarded to the interested city departments and to the architectural and building societies of New York."

At a more recent meeting held on April 30, when the matter was again taken up, the following resolution was presented and also unanimously passed:

"RESOLVED that the Brooklyn Chapter A.I.A. advocates and supports the creation of a Board of Appeals which shall have similar powers with regard to the Tenement House Law as is now given the Board of Standards and Appeals with regard to the Building Code of New York City."

If the modifications in the Tenement House Law recommended herein could be brought about by remedial legislation such buildings as the Vanderbilt tenement, housing 384 families, and the John Jay dwellings, housing 287 families, might be built containing features of plan and arrangement tending to greater economy of floor space with ample light and ventilation for living rooms and without interior intercommunication between families.

In a modified form known as the quadrant or saw tooth arrangement of separate units, the plan is adaptable to the industrial town for the housing of many families with the maximum of light, and air and open yards and gardens.

It would seem that the application of the Tenement House Law to varying conditions could be more scientifically administered and with safety, justice and equity for every interest, by the creation of a board of appeals having authority to interpret and pass upon the intent of the law in its relation to the many unusual conditions which are presented through the efforts which are being expended by owners and architects to improve housing facilities both urban and suburban.

The Brooklyn Chapter A. I. A. has also indorsed and approved the Lawson Tenement House bill now before the legislature and which legalizes the conversion of three-story and basement dwellings into three-family dwellings under reasonable conditions, as being a step in the right direction.

Sketching Out of Doors in War Time

VERNON HOWE BAILEY ARRESTED

Vernon Howe Bailey, widely known as an illustrator of architectural subjects, was arrested on May 18 while sketching in Times Square. Bailey was taken to court on the technical charge of attracting a crowd and obstructing traffic. The real cause of his being taken into custody was his inability to produce proper credentials.

He was discharged with a reprimand, the mag-

istrate adding: "These are trying times, and there is a necessity for extraordinary precautions. Hereafter, when an officer asks for your credentials, show them and obey his orders."

War Damage to Venice

Venice has been attacked from the air twenty-one times since the outbreak of the war. The first bombardment (writes Mr. Horatio Brown in the *Times* in a communication dating from Venice) took place on May 24, 1915, the day war was declared. All the attacks have been carried out by aeroplanes. In 1915 there were eight, last year thirteen. As to the actual damage done to the city, it is surprising that there has been so little when we remember the frequency and viciousness of the attacks. Many of the bombs fell in the water, and were comparatively harmless; but neither the Venetians nor their enemies can tell what precious monument may not be sacrificed in some future raid. Curiously enough, the most conspicuous buildings damaged so far have been churches; some private houses have been wrecked, but none of the monumental palaces. The raid of Oct. 20, 1915, which took place at 10.30 p.m., demolished the roof of the Scalzi Church, near the railway station, with the ceiling by Tiepolo, repsenting the translation of the Holy House; the pavement and the marble decorations also suffered severely. Though the fresco was not one of Tiepolo's finest works, it can never be replaced, and, on the whole, the damage to the Scalzi is the most serious artistic injury that Venice has so far received.—*Architectural Review* (London).

Building Zones

Building Zones is a book recently published by the Record and Guide Publishing Company for the Lawyers Mortgage Company. It is edited by George B. Ford, consultant to the Commission on Building Districts and Restrictions of the City of New York.

There has been a general demand for a book which would explain to the layman the intricacies of the Building Zone resolution as passed recently by the Board of Estimate and Apportionment of New York City. This book has been published to fill that need. It contains 16 colored maps, showing the actual height, area and use restrictions and zones in most of Greater New York, and also gives the law in full with new annotations describing its application, and is illustrated with a great many diagrams to show the application of the law to typical cases.

Much space has been devoted to the interpretation of the law during the first six or eight months it has been in effect. All the amendments which have been considered by the Board of Estimate and Apportionment are described in detail with an analysis of the board's action thereon, and also all of the several hundred cases which have come before the Board of Appeals for exemption have been cited and analyzed in detail. The whole procedure before both of these bodies for securing exemptions or amendments is carefully explained.

A special chapter on the "Constitutionality of the Law," written by Herbert S. Swan, secretary of the New York Protective Committee, has been added. In it are cited and analyzed all of the salient cases throughout the country touching on this subject.

A concluding chapter has been added by the editor in which an attempt is made to show the ramifications of zoning, its advantages and limitations, the principles on which a zoning law should be started and worked out, and in general the application of the principle to other cities.

The book contains 75 explanatory diagrams and 16 full page colored maps of the official restrictions in force in New York. Record and Guide Publishing Company, New York, are the publishers, and the price $1.

The Five-Inch Bookshelf

In one of Dr. Giles' talks recently he told his traveling men friends that if they wished to know something which would make them more capable, better, wiser and more productive, they could encompass it within a space of five inches.

To this end he suggests the following selections, which he pronounces the basis of a liberal education:

"Chapter 10 on 'Habit,' in Professor James' Psychology. This is about yourself.

"Chapter on 'Supreme Regrets' in Lord Rosebery's 'Last Days of Napoleon.' The bitterness of defeat is told there.

"Chapter 12, of Lecky's 'Map of Life.' Deals with the management of character.

"Chapter 7, of Carlyle's 'Sartor Resartus.' The most wonderful collocation of ideas in any like compass.

"Chapters 6, 7 and 8, of Benjamin Franklin's 'Autobiography.'. Read this and you will read the rest.

" 'Compensation,' by Emerson.

"Chapter 9, of 'The Wonders of Life,' by Haeckel, and the chapters on 'Science and Religion,' in Haeckel's 'Riddle of the Universe.' "—*The Upholsterer.*

Executive Committee Meeting, A. I. A., Atlanta, Ga., May 17 and 18

(By Our Special Correspondent)

THE officers and Executive Committee of the American Institute of Architects held a stated business meeting in Atlanta on May 17th and 18th, which was made the occasion of an informal convention of architects from Georgia, Florida and Alabama. Some thirty men sat down for dinner under a magnificent oak tree on a terrace at the Piedmont Riding and Driving Club. An ideally beautiful night scene under the open sky, with a picturesque setting of vine embowered club house and encircling electric lights and flowers, gave inspiration grave and gay to the architects assembled under the great oak tree. An excellent dinner, none the less delicious because served in a "bone dry" state, was followed by a series of speeches interspersed even with architectural songs. Chapter President Sayward, a happy toastmaster, introduced, and flatteringly traduced, several speakers from among hosts and guests. President Mauran gave an interesting and helpfully inspiring address. Mr. Jensen of Chicago was entertaining and serious. Mr. Fenner of New York was listened to with great interest. Mr. Parker of Boston was witty and full of fun and philosophy. Mr. Pfeifer of Miami lectured with the diction of a professor of architecture. Mr. Hentz of Atlanta gave the final expression of southern hospitality and gracious and grateful compliment to the visitors.

Treasurer Waid of New York made informal remarks about the work of the Institute and upon a dry subject, registration, which is much in the minds of architects in various states just now. He said in effect: "My presence here may be accounted for simply as a necessary evil. It's a grudging intoleration which you all have for a treasurer. The finances of the Institute have to be given very careful consideration by the Board of Directors, and the budget list of expenditures cut to correspond with our probable income of the year is a graphic diagram limiting very materially the amount of work which can be done by various committees. And yet as treasurer I am in a position to realize that many committeemen go ahead with their work even when they have to reach into their own pockets to meet expenses. This is true of officers, also, like our honored President Mauran, who is always ready to respond to the calls and the many opportunities for service which come to him by virtue of his headship of the Institute. Many railway fare and hotel bills are paid out of his own pocket and nothing said while he sacrifices his own private practice in loyal service to the profession. Just now that loyal service means at the same time patriotic work for our country in the greatest crisis of its history. His efforts to mobilize the technical ability of architects and place our profession in position to render its best help to the government in the war are worth hearing about.

"May I not impose on you a moment by talking about the mobilization of material for making architects which must go on during peace and war? I understand that you have in hand the preparation of a state law for regulating the practice of architecture in Georgia. Such laws, as you know, have been enacted in a dozen states and eventually doubtless will be in all. While the Institute has never urged such legislation, the officers and directors recognize it as a powerful influence in raising our educational standards. If you are to have such a law, we beg of you to make it an elevator and not a fence and to see that it is based on one important principle. Make it a help to place architects on a higher plane, but do not use it as a club to prevent other people doing work which you think rightfully belongs to architects. Let plumbers and steam fitters quarrel as to which shall do certain work. Architects should be professional men and not a union to monopolize any kind of work either by combination or by force of law. We should not attempt to forbid engineers from designing buildings. Often they can do it as well or better than we can. We should not even bar contractors from designing their buildings except to the extent that building laws should forbid all incompetent. Architects should claim the right to do all architectural work by virtue of their being the best qualified to do it and not by any other compulsion.

"How is a registration law, then, to accomplish its purpose?

"First, by giving a copyright with the title 'Architect'—that is to say, forbidding anyone to use the name 'Architect' on his letter head or his drawings until he has qualified according to law.

"Second, by fixing the right and proper general and technical educational standards in the law.

"If we make the title 'Architect' mean real qualification, the public will soon realize where to go to get work properly done.

"One immediate effect of a good registration law is to encourage all young men who can do so to take a full architectural school course. At the same time the syllabus or outline of examinations published by the Board of Examiners should serve as a guide for the study and encouragement of draughtsmen who cannot go to a technical school and be of direct assistance to them in preparing for examinations."

Thomas Jefferson, Architect

It was all right for Thomas Jefferson to write the Declaration of Independence, to revolutionize the laws of Virginia as to primogeniture, and establish religious freedom and create a feeling of tolerance among the people, but they were not proud that he was also a great architect.

On this point the *Christian Science Monitor* says:

"The truth is, neither in his time, nor for years afterward, were Jefferson's fellow-countrymen willing to dissociate him from his public achievements for any reason whatsoever. For his part in the framing of the Declaration of Independence, for his part in the making of the Constitution, and for his part in directing the government in its tender years, they were willing to grant him all praise, to do him all honor, but they could not become enthusiastic when told that he was an expert draftsman and had designed some very fine buildings. They even thought that it was beneath the dignity of so great a man to putter around with a trestle board, compasses, rules, crayons, and the like. Their idea of him was that he should devote his whole time to composing declarations, framing constitutions or dictating essays on the fundamentals of democracy."

But Jefferson's architectural work was as unhampered by established limitations as was his political vision. He designed the Virginia Capitol at Richmond, the graceful University of Virginia group and the mansion at Monticello, and these achievements have been admired for generations.—*Southern Architect and Building News.*

Arresting Decay of Wood in Buildings

Research was begun last year at the Forest Products Laboratory, at Madison, Wis., to determine the "killing points" in temperature and humidity, of common fungi found in American buildings, in order that the decay of wood in buildings might be arrested as much as possible. These studies have already yielded data of considerable importance. It was found, for example, that with a temperature of approximately 100 deg. F., and a high humidity, the mycelia of certain fungi can be killed. This is contrary to a popular conception that methods of arresting growth of these fungi involve the use of hot dry air.

Field and laboratory studies indicate that much more care should be exercised in the selection of timber and in the construction of buildings to avoid conditions favorable to decay. A number of inspections of buildings which have given trouble on account of decay have shown that any one of the following causes may result in rapid deterioration of the building:

The use of green timber.

Allowing timber to get wet during construction.

Allowing the timber to absorb moisture after the building is finished, because of leaks or lack of ventilation.

The use of timbers containing too much sapwood.

The use of timbers which have already started to decay.

The avoidance of these conditions will, as a rule, prevent decay. In special cases, however, decay can only be prevented by preservative treatment. For this purpose salts such as zinc chloride and sodium fluoride are better than creosote for buildings.—*Improvement Bulletin.*

Personal

Mr. John B. Hamme, architect, has removed his offices to the New City Bank Building, 31 West Market Street, York, Pa., where he will continue the practice of his profession.

Messrs. Watson & Huckel, architects, Philadelphia, Pa., announce the death of Mr. Samuel Huckel, Jr. Mr. Frank R. Watson will continue the practice of architecture at 1211 Walnut Street.

It is announced that Mr. R. E. Stoetzel, architect, has opened an office for the practice of architecture at 208 North Fifth Avenue, Chicago, Ill., and would be pleased to receive manufacturers' samples and catalogs.

J. H. Skiff, architect, has opened an office at McPherson, Kan. Manufacturers are requested to cross off their list J. H. Skiff, Newton, Kan., and of Burton, Kan., the several addresses being one and the same.

Arthur W. Archer, architect, announces that he has opened an office at 609-12 New England Building, Kansas City, Mo., for the practice of his profession. He desires to receive manufacturers' samples and catalogs.

Mr. Charles E. Thomas, architect, announces that following the dissolution of the firm of MacLaren & Thomas he has opened offices at 223-225 Hagerman Building, where he will continue the practice of architecture. Mr. Grant A. Wilson of the former firm will remain with Mr. Thomas.

COLONNADE AND APPROACHES, LOOKING WEST

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, JUNE 6, 1917 NUMBER 2163

City Planning in War Time

By GEORGE B. FORD

Member of the American Industrial Commission to France
Consultant to the Committee on City Plan of the Board of Estimate and Apportionment of New York.

IN Europe aviation has raised a whole series of new problems in the planning of cities, many of which demand immediate solution. When we were in France this fall we were taken out to one of the great aeroplane camps used in the defense of Paris. There, within the high enclosing wall, a field stretched away unbroken by buildings or trees for several miles, while far down each side ran a continuous row of aeroplane sheds. They told us that there were more aeroplanes then in that one station than there were in all of France at the beginning of the war; more than there were to-day in the United States. And yet, that was only one of a large number of aeroplane or balloon fields throughout France. These fields for training, maneuvers and storage require acres of continuous open space almost level in character and well drained. Around most cities such space is difficult to find and it is only by planning well ahead that adequate reservations can be made.

The remarkable increase in the common use of aeroplane and dirigible balloons in Europe to-day makes it obvious that their use for commercial and pleasure purposes after the war is going to be perhaps as rapid in its growth as was that of the automobile.

Still more important in city planning is the problem of providing convenient landing places for aeroplanes. When Ruth Law flew across from Chicago to New York she had to change her plans entirely on account of the difficulty in finding a safe landing place. In New York City about the only place that has been considered desirable for landing is Governors' Island. With the thousands of aeroplanes that will be flying in this country within a few years, whether there is war or not, the problem of providing landing spaces will become rapidly more urgent. In fact, the Post Office Department is now, in conjunction with the Aero Club of America, planning to select appropriate fields for landing in or near every important center. In France most of the aeroplanes, from a standing start, go only some 100 or 150 yards before leaving the ground and then shoot up into the air at a surprisingly sharp angle. They land easily in a 30-acre field. There are any number of places in New York, and in most of our other cities and towns, which would make ideal landing places if they were leveled off, and trees, bushes, wires and other obstructions removed. The problem of landing at night is perhaps the most difficult and dangerous of all. In France we found the landing places specially lighted by searchlights or by a peculiar formation of the surrounding lamps, so that, seen from above, they are readily recognized. Then, too, by day all sorts of special indications were used—whitewash or colored diagrams drawn on the ground, so that an aeroplane from a mile or two in the air could recognize the significance of the marks.

One of the most important problems for the city in time of peace is the moving of crowds of people quickly from one place to another. Its importance is increased tenfold in time of war. In France we saw everywhere parts of a great network of national military roads. They often go straight up and down over hills and valleys as did our old turnpikes, but always with the grades cut down to the minimum and with ample width and excellent surface. The roadways are never too narrow for two great motor trucks to pass each other at high speed —far different from our niggardly custom. Though these national roads go through the towns and cities, even in the larger cities they continue to belong to the national government and are paid for and maintained by it. They are the backbone of efficiency in the handling of people and goods about the country. Without them France would have had the greatest difficulty in meeting the situation with which she has been confronted.

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As for the railroads in France, here again we found men could be mobilized or handled in masses from one town to another with the greatest ease and speed. The special characteristics were ample approaches to the railway stations and extensive yards. Many of the railroad lines have been laid out with the war needs particularly in view, despite the fact that under peace conditions these lines are not profitable. However, they have more than proved their value since the beginning of the war. With regard to tramways, not only are the regular systems laid out strategically, but all over the country, through districts where a standard-gage railroad could not be provided, we found little light narrow-gage railroads with trains of three to eight cars that were in constant use.

Motor buses have played an exceptional role in France since the beginning of the war. It was the motor buses and taxicabs which saved Paris, because they were available and because they were a mobile means of transit. Entirely apart from the usefulness of motor buses in time of peace, it is a great asset to have large numbers of them immediately available in case a sudden need arises for transportation of large bodies of troops.

In the transportation and handling of supplies we found that great changes have been made in France since the beginning of the war. Things had to be handled in much greater quantities and with as little loss of time as possible. In many parts of the country, particularly near the war zone, we saw new railroads being built and old ones considerably extended. In almost all of the freight yards that we saw extensions were being made, new terminal tracks being put in, huge new warehouses being built, all with a view to handling war supplies quickly and without waste. At Marseilles we saw a great new classification yard along the new docks that the city is now building, rendered necessary by the trade that has come to the port on account of the war.

We went over the ports of Marseilles, Bordeaux, Rouen and to some extent Havre, but we hardly recognized them, so much had they been changed; building going on on an enormous scale everywhere, the ports being doubled, trebled, and even quadrupled in size, and even at that, ships waiting at anchor for days and weeks outside the port for a chance to unload. It was a condition of things that troubled us a great deal, for we realized that hardly a city in America was prepared to meet emergency conditions in like fashion. If nothing else, a comprehensive plan should be worked out now, so that it can be carried out as speedily as possible when the time comes.

Rivers and canals were being deepened and broadened on every hand, and new ones were being built, new boat services were being started, all because the cheaper handling of freight was becoming an increasingly serious problem in France, since it also means a saving of coal and of men, both of which are at a premium.

However, the thing that probably impressed us most in the handling of goods both along the waterfront and in the local terminals, was the extensive use of handling machinery. Even in the small villages the freight yards were equipped with cranes and other handling devices, while in the larger yards and along the docks almost nothing was done by hand. Any mechanical device that would save labor was more than paying in its way, as it released men for services at the front.

The handling of foodstuffs and war supplies in particular has become a most important problem, with the bringing together and the storage of great quantities of supplies and the provision of efficient means for their distribution. Along the railways or waterways around the cities and larger towns we saw acres of new sheds that have been erected since the war, just for the handling of war supplies. Often they were inconveniently located due to the lack of planning beforehand. The nearer we came to the front, the greater the number of these storage fields. In every case it was necessary to find large, level, well-drained fields.

The handling of foodstuffs for the civilian population is a problem to which France has given careful thought for a good many years. Every city, town and village has its municipal retail markets in big halls open at the sides, where stalls are rented to the little dealers at the minimum economic rental. This gives the city a chance to control not only the healthfulness and quality of foodstuffs, but also the maximum prices, all of which has proven a most effective means of keeping down the high cost of living during the war. More than that, however, there has been a very strong tendency of late years in France, as well as in other European countries, to develop public wholesale auction markets, and a number of big retail markets have recently been changed for the most part from retail to wholesale use, all of which tends to keep down costs. The raising of foodstuffs is a most urgent problem in all of the countries at war. In France it has long been the rule to cultivate every acre of ground, including all of the vacant lots in cities. Workingmen's Gardens Societies lease all available vacant lots and rent them to wage earners' families, in plots of 2500 to 5000 square feet for a nominal rent. Every member of the family works in the garden. A plot will often keep a family of eight or ten in vegetables the year round.

One of the most serious problems of all is the locating and laying out of the mobilization camps,

the barracks for soldiers or prisoners, and the hospital blocks. We know only too well what trouble we had here in America when we tried to mobilize our troops quickly in the spring of 1916. In France before the war such mobilization places had been provided within easy reach of the railroads and with special sidings arranged to take care of the troop trains effectively. More than that, the fields were thoroughly drained and provided with water and sewage disposal and other necessities. Every city, too, has large areas devoted to barracks especially designed for living purposes. The prison camps and hospital blocks that we saw were very similar in character to the mobilization and training camps. They had the same type of long, low wooden sheds, clean, sanitary, with plenty of ventilation and good heating, excellent drainage, and with water and sewer connections so that the health of the prisoners could be preserved.

In housing, we were astonished at the striking development which has taken place since the war began. We found in Limoges, for example, that some six acres of four and five-story tenements in the heart of the city had been razed to the ground. At a cost of a great many millions the city was going ahead in the midst of war times to lay out new and broader streets and rebuild the district along modern city-planning lines. In Marseilles we found fourteen and a half acres of old six and seven-story tenements in the center of the city already torn down. At a cost of something like 40,000,000 francs the city was laying out new broad streets and open spaces, erecting new buildings of a modern character, all as a matter of "Preparedness for Peace." It has been borne in on them very strongly that with the loss of a million or more of their best men, they are bound to do everything they can to preserve and build up the next generation; that they cannot afford to let it grow up in unsanitary and disagreeable surroundings.

These old quarters were a serious conflagration menace and center for the spread of disease. It was especially dangerous to leave them in war time. In America, some of our largest cities have old sections with narrow streets, where if a fire or explosion were to be started, the whole district would go. It is our duty to seriously consider opening up these districts now before it is too late. We can do it far easier to-day than we could at any time in the past or in the future. We have a wonderful opportunity to-day to open up the cramped old sections of our cities. If we are big enough to seize it, we will bestow the greatest benefit on the city not only now but for all time to come.

In the munition plants we found the barracks and houses, the dining halls and hospitals, that have been built to take care of the thousands of employees, models of healthfulness. They were rarely attractive, because they had not had time to think out attractive forms at the price, but they were businesslike. In England we saw the plans of a single munition plant nearly as large as the island of Manhattan, where they expected to house eventually nearly 100,000 workers. The whole area was being planned with all the care and foresight possible. The general buildings were permanent and would be the nucleus of a city later. The typical houses and barracks were being built so that they could be taken down after the war and shipped over to Belgium or France and used in place of buildings destroyed by war. This brings up the great problem of reconstruction work to be done after the war, of which we saw a great many plans, and, in fact, much actual work then in progress. But that is a whole story in itself.

Heretofore France has never known recreation in the sense that we know it. Recreation has usually been "sport," and even at that, largely borrowed from England. But partly as a result of the outdoor life at the front and partly as a matter of reasoning, the Frenchman has come to realize the necessity of providing recreation places in his cities and towns. The movement is very recent, but the new recreation parks and playgrounds designed for Rheims, Clermonton, Argonne and Bordeaux gave us a suggestion of the importance that the new movement is taking in France. As success in war or peace depends so largely on keeping both men and women in the best physical condition, the provision of play space becomes doubly imperative.

War shows up very clearly the need and lack of general city planning. All of the various matters that are touched upon here and many others must be woven together into a unified comprehensive plan. We found in Paris that the city government had since the beginning of the war organized a city planning bureau with broad powers which was planning comprehensively the whole metropolitan area, not only within the city, but through all the surrounding district. In Lyons we found similar plans being worked out. In London the architects, engineers and city officials have come together and are working out most extraordinarily comprehensive plans, especially for traffic routes for an area of nearly two thousand square miles around London.

But more striking still were the plans which they showed us for the replanning of Rheims and some of the other destroyed towns. In France they have come to realize that they must make a virtue of their necessity and rebuild the destroyed cities along modern, scientific lines, always preserving as far as possible the charm of the past. They have gone further still, and now appreciate the vital need of general scientific planning. They have actually

framed a law which has already passed the Senate —the Loi Cornudet—according to which every city, town or village in France, regardless of whether it is in the destroyed area or not, will be forced to lay out all its future developments according to modern city-planning principles. Every community will have to have its city-planning commission, over which there will be a general commission in each of the eighty-six departments, and over these in turn there will be a federal commission, so that all may work along similar lines and so that the whole area of France will be laid out according to one great comprehensive plan.

They are doing these things because they find that they have got to do them to meet the economic competition with other countries which is coming after the war. There must be no waste, and they are providing to eliminate every possibility of it. France is doing all these things at enormous cost, despite the superhuman work of carrying on the war. She is doing it because she finds it necessary to make up for the mistakes of unpreparedness. We in America are remarkably fortunate in having the example of their experience before us. It is comparatively easy for us to plan for these emergencies, be they in aviation, in the transportation of men or supplies, in housing or recreation, or in the working out of general all-including plans. In peace times it is sheer common sense to give our best thought to the planning of our cities. It is imperative to do so now to meet the demands of war.

Visualizing a Building

A newspaper correspondent to a London paper expresses surprise that the architecture of St. George's Hall in Liverpool should be so successful in embodying and expressing the classical spirit, as the architect was known to have never enjoyed the advantages of travel.

The Architects and Builders Journal of London, commenting on this statement, says:

"Without denying for a moment that it is a very great advantage to see in situ the actual work of the monumental builders, one is nevertheless convinced that such 'ocular demonstration' is not absolutely essential to a vivid perception—in the mind's eye—of a building of which pictures and plans are available, and of which the dimensions have been accurately ascertained. It is, indeed, an important part of an architect's training that he shall be able to visualize clearly and instantly in three dimensions a building represented on a plane surface. If he have what is called a good visual memory, he can do more than this—not only can be conjure up a more or less vivid vision of any building which has impressed him, but he can—'as imagination bodies forth the forms of things unknown'—see mentally the building he wishes to design—see it, that is, before he attempts to draw it; and unfortunately the delineation always falls considerably short of the dream-design. In this respect temperaments differ greatly. Just as some authors cannot compose without the aid of a pen—it is said that Dickens could not, and that when writing leaders for the *Daily News* he never knew what line he was going to take until he was led by his pen, which was to him as a blind man's dog—so there are doubtless many architects who require pencil and paper as first-aid or stimulus. Designing in this tentative and piecemeal way—objective designing, one may perhaps call it—is probably more common than that which is a more or less imperfect record of a subjective conception. That Elmes had the inner vision strongly inherent there can be as little doubt as that he fed and strengthened it by the sedulous and imaginative study of all the accessible documents."

Lafayette Memorial, Prospect Park, Brooklyn, N. Y.

THE principal feature of the Lafayette Memorial is a panel of bronze about twelve feet in length by ten feet in height, upon which are sculptured a figure of Lafayette seven feet in height and a colored servant, who holds the horse of his master. Lafayette, in the uniform of a general of the American Army, is represented as a youth of twenty, which was his age when he offered his services to Washington. An attempt has been made to give him the air of a patrician, accentuated by the stockiness of the negro attendant. A magnolia tree fills out the composition.

The bronze tablet rests upon and against a structure of granite of Italian Renaissance design. This forms a base and frame and background for it.

In front of the monument proper is a platform 32 feet deep by 64 feet in length, paved with brick, with a retaining wall and a seat at either end, of granite. Provision is made for low shrubbery back of the seats and back of the monument proper. Bronze lamp-posts are set at either end of the front of the platform. The memorial forms an entrance to the park at Ninth Street and Prospect Park West.

The architectural setting and the plan are by Henry Bacon, architect, of New York. Daniel Chester French of New York was the sculptor.

This memorial was unveiled on May 10, by Marshal Joffré, who with other members of the French Commission was the guest of honor on the occasion.

LAFAYETTE MEMORIAL, PROSPECT PARK, BROOKLYN, N. Y.
DANIEL CHESTER FRENCH, *SCULPTOR*, HENRY BACON, *ARCHITECT*.

Recent Books

CITY PLANNING PROGRESS—1917. Compiled by the Committee on Town Planning of the American Institute of Architects. Edited by George B. Ford. 207 Pages, 218 Illustrations. The Journal of the American Institute of Architects, The Octagon, Washington, D. C. $1.50 Paper. $2.00 Cloth. Postage 20c extra.

Perhaps in no better or more forceful way could a committee of the American Institute of Architects demonstrate an unselfish contribution of valuable time than has the Committeee on Town Planning in the preparation of this very important book, which is, first of all, a report of the committee and the concise rendering of the results of its deliberations.

We had, on the occasion of the last convention, to comment on the labors of the various committees of the Institute and the large measure of valuable service rendered, not only to the Institute members, but to the profession at large.

We also commented on the fact that it became incumbent on the many men not already affiliated with the Institute to lend a more willing ear to the invitations that had been extended to join the national body.

It is a service of this nature that makes the institute in the largest sense a representative body. The good results that accrue are felt by every practising architect in this country.

This volume is a conclusive answer to critics who have endeavored to create a doubt as to the hold city planning has taken on every practical American. It is, in fact, a record of all the good accomplishment since the problems of city planning were first taken up and given careful study by architects. There is no verbiage, no padding of the subject, no introduction of unnecessary illustration. In short, the work is encyclopedic in its character, and, this fact established, it may well be used in every case where knowledge is sought of the things that have been done in the correction of early errors in civic planning or the beginning of projects that have received the most skillful consideration.

The book's compilation of data from towns and cities is supplemented by an introductory discussion on how to get started in city planning, and by a summary. The latter includes among its subheads the leading accomplishments of the year, acts and ordinances, State, interurban and metropolitan conferences, county planning, instruction in city planning, city planning abroad, and the effect of the war on city planning. Then comes a brief but admirable list of references on city planning compiled by Theodora Kimball of the Harvard School of Landscape Architecture; and, finally, a very complete topical index.

The Town Planning Committee, to whose co-operative work not only the Institute but the cause of city planning is so greatly indebted, is made up of the following:

George B. Ford, Chairman, New York City; Frederick L. Ackerman, New York; C. H. Alden, Seattle; Hubert Burnham, Chicago; C. H. Cheney, San Francisco; J. Randolph Coolidge, Boston; Charles A. Favrot, New Orleans; A. L. Fechheimer, Cincinnati; F. E. Giesecke, Austin, Texas; Edwin H. Hewitt, Minneapolis; B. S. Hubbell, Cleveland; Louis La Beaume, St. Louis; Ellis F. Lawrence, Portland, Ore.; Ben J. Lubschez, Kansas City, Mo.; John Hall Rankin, Philadelphia; E. J. Russell, St. Louis.

The book is not copyrighted. Newspapers and commercial and civic bodies are invited to quote from it, to the end that through its means the ideals of city planning may be extended to the utmost.

English Details No. 2

FIREPLACE—COMMON HALL, ABBOTT'S HOSPITAL, GUILDFORD, SURREY

THE fireplace illustrated is from the institution established in Guildford in 1619, by George Abbott, a native of the town and Archbishop of Canterbury. It provides for the maintenance of thirteen men and thirteen women.

Abbott's Hospital is one of the finest examples of the period, having been constructed and furnished both inside and out in the one prevailing style.

The exterior, with its admirable façade, vies with the Guildford Town Hall as the most interesting building on its precipitous High Street. Entering by the great door, we come to the court, about which range the quarters for the beneficiaries.

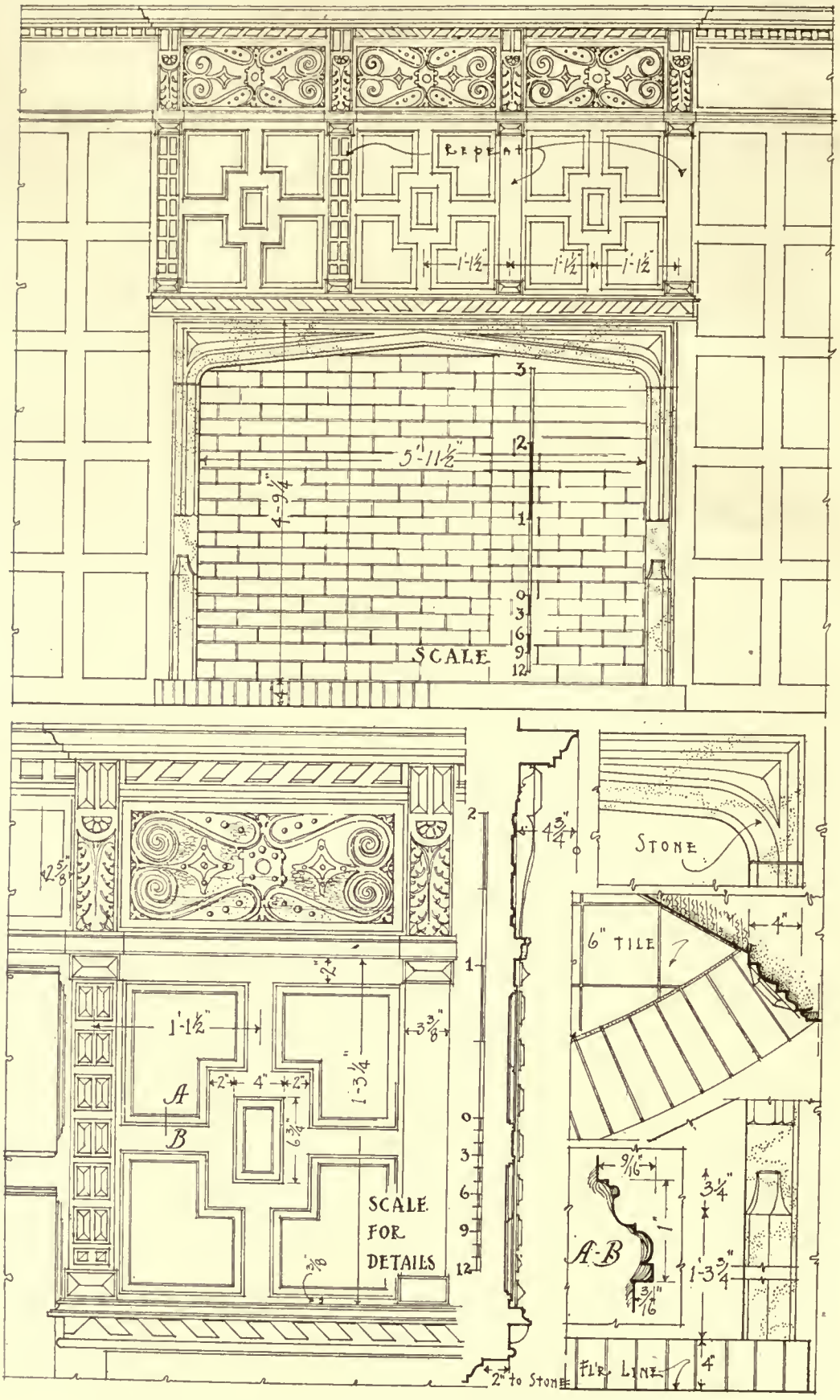
Opposite the principal entrance to the court and on axis with it, there is a passage which leads to the great terrace in the rear, with its gardens and summerhouses beyond. At the immediate right of this passage is the Common Hall, the fireplace of which is the subject of this issue.

The over-mantel and the surrounding paneling in this room have been softened and mellowed in tone by the years, till now, with its rich color and original furniture, it is a gem of the period.

FIREPLACE IN COMMON HALL, ABBOTT'S HOSPITAL, GUILDFORD, SUSSEX

DRAWINGS AND PHOTOGRAPHS
BY WALTER G. THOMAS

ENGLISH DETAILS
NO. 2



FIREPLACE IN COMMON HALL, ABBOTT'S HOSPITAL, GUILDFORD, SUSSEX

DRAWINGS AND PHOTOGRAPHS BY WALTER G. THOMAS

ENGLISH DETAILS NO. 2

FRONT VIEW, LOOKING SOUTHWEST

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*

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VESTIBULE AND ROTUNDA

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*

GRAND JURY ROOM

ROTUNDA

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*

TYPICAL SUPREME COURT ROOM (ONE OF FOUR)

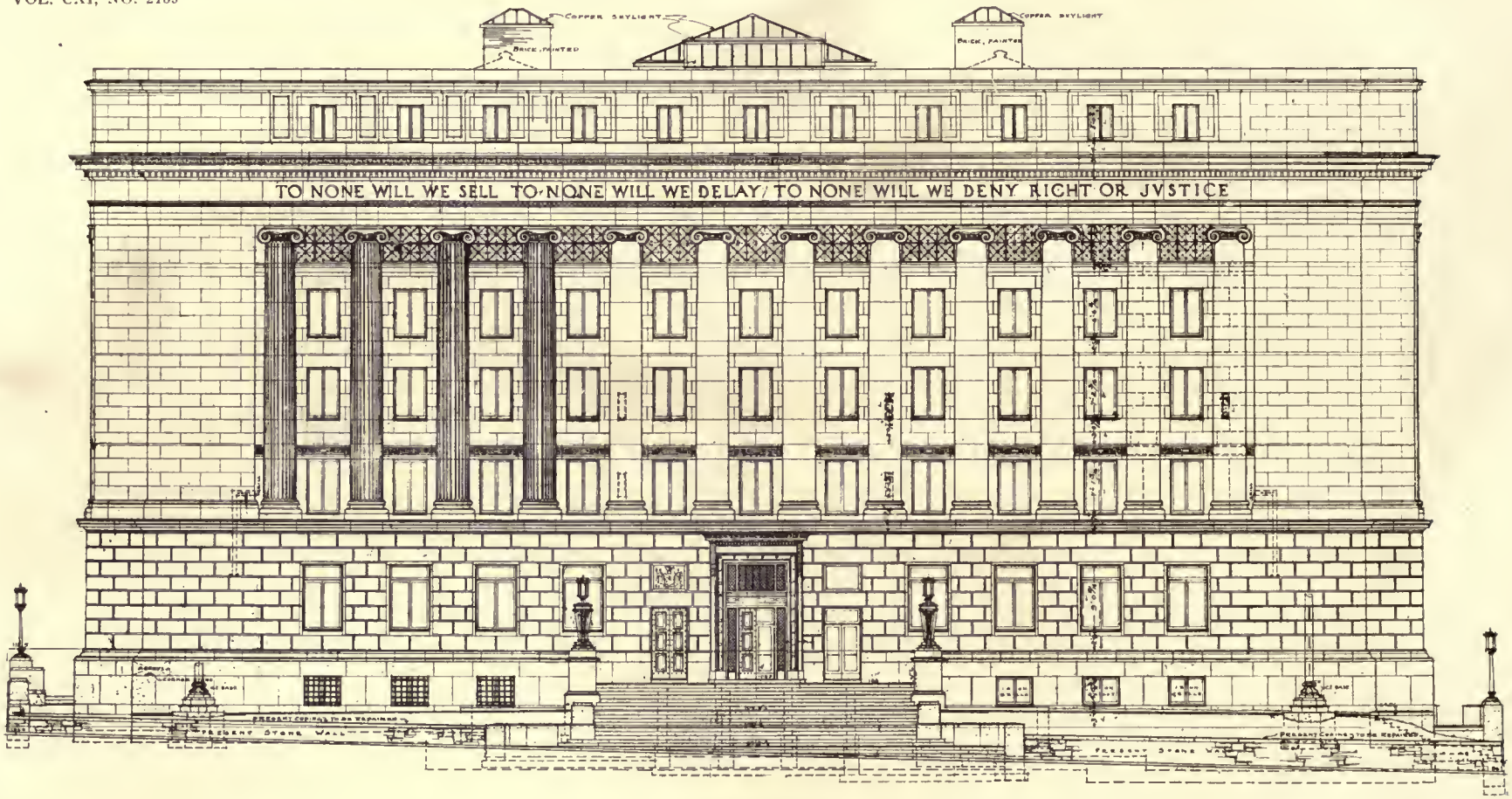
WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*

SURROGATE'S COURT ROOM

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*

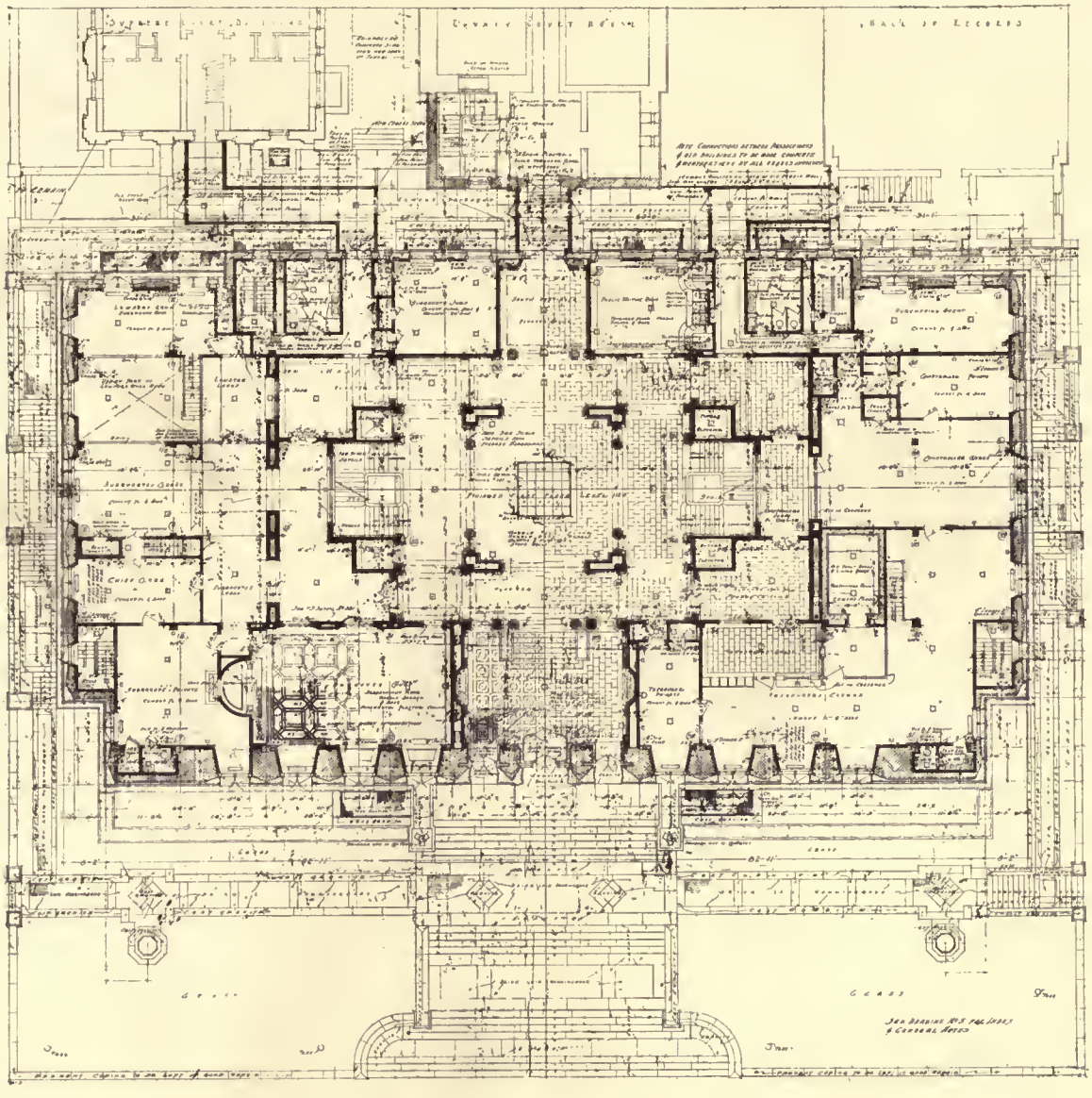


NORTH ELEVATION

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*

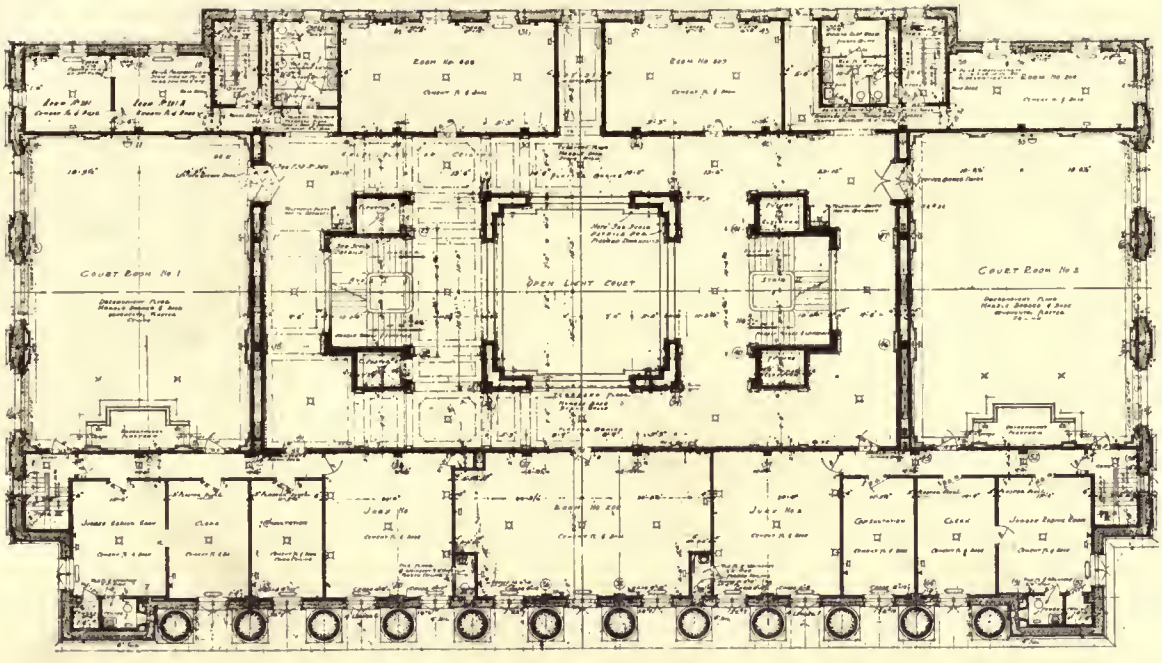
VOL. CXI, NO. 2163 JUNE 6, 1917



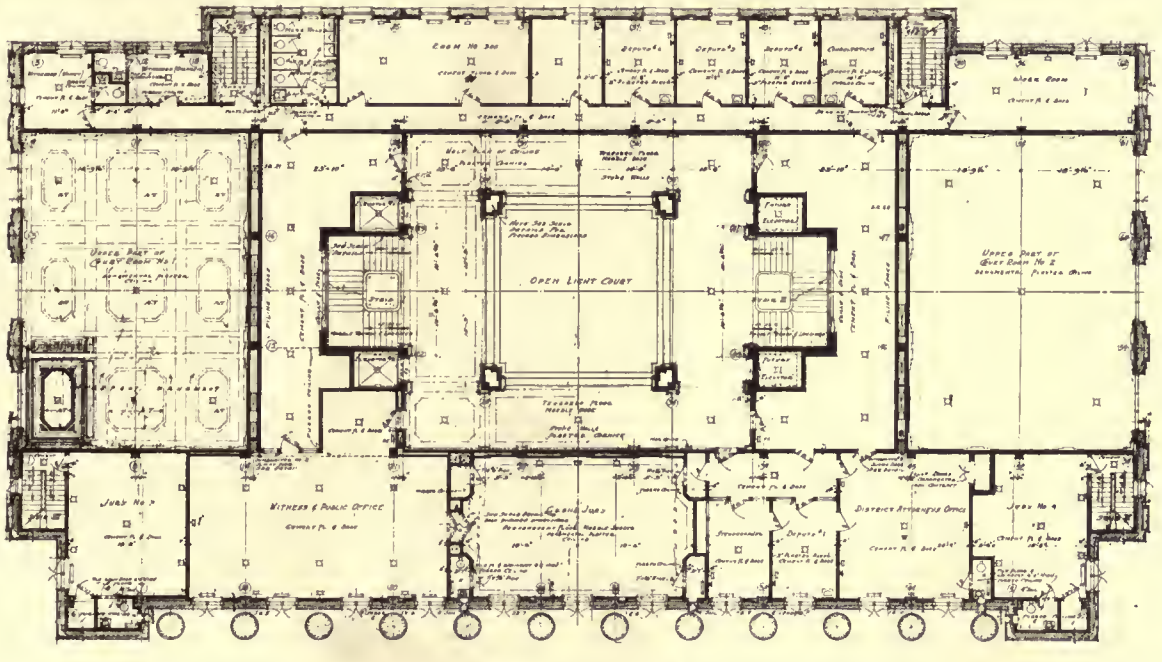
FIRST FLOOR PLAN

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*



SECOND FLOOR PLAN

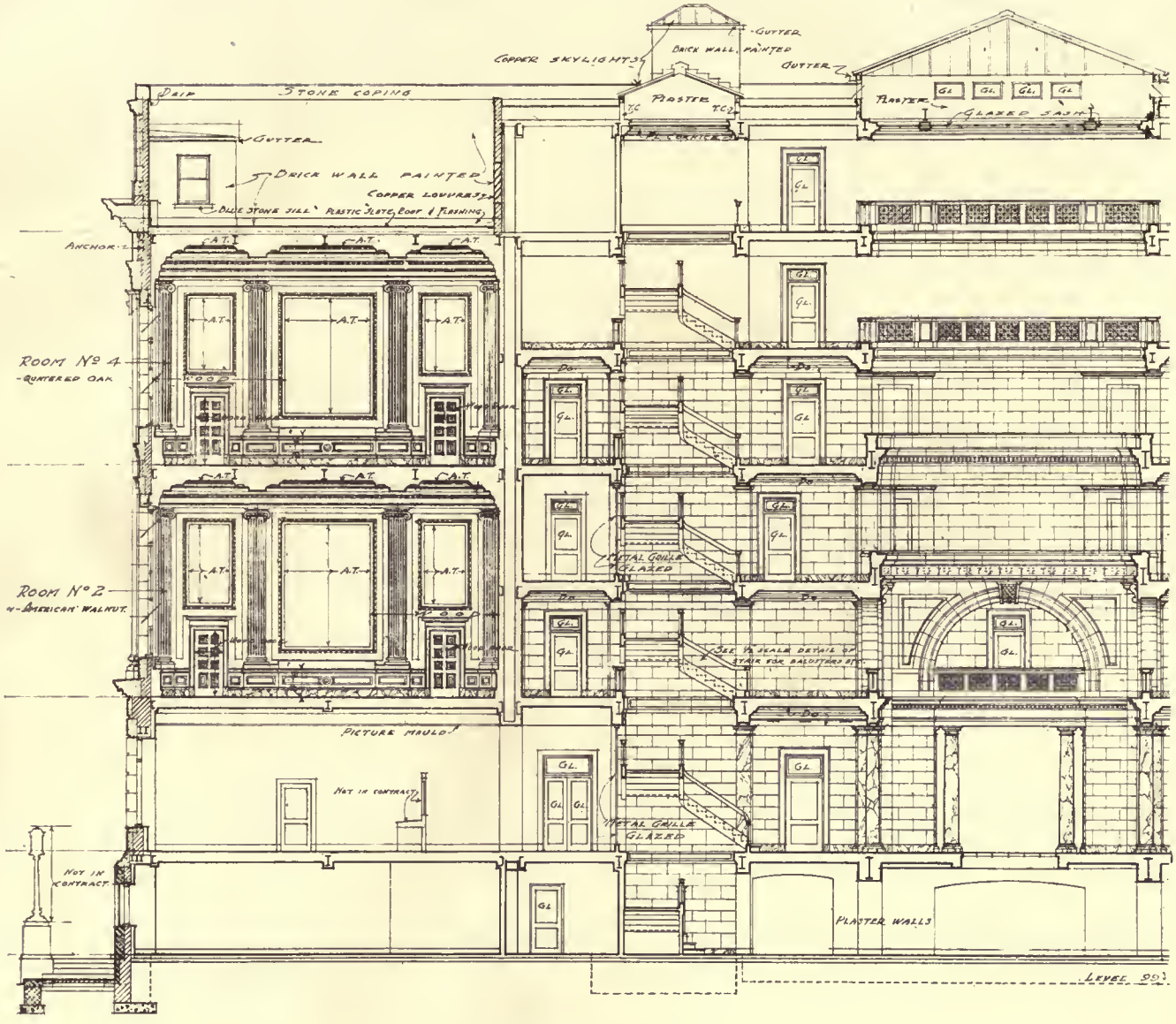


THIRD FLOOR PLAN

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*

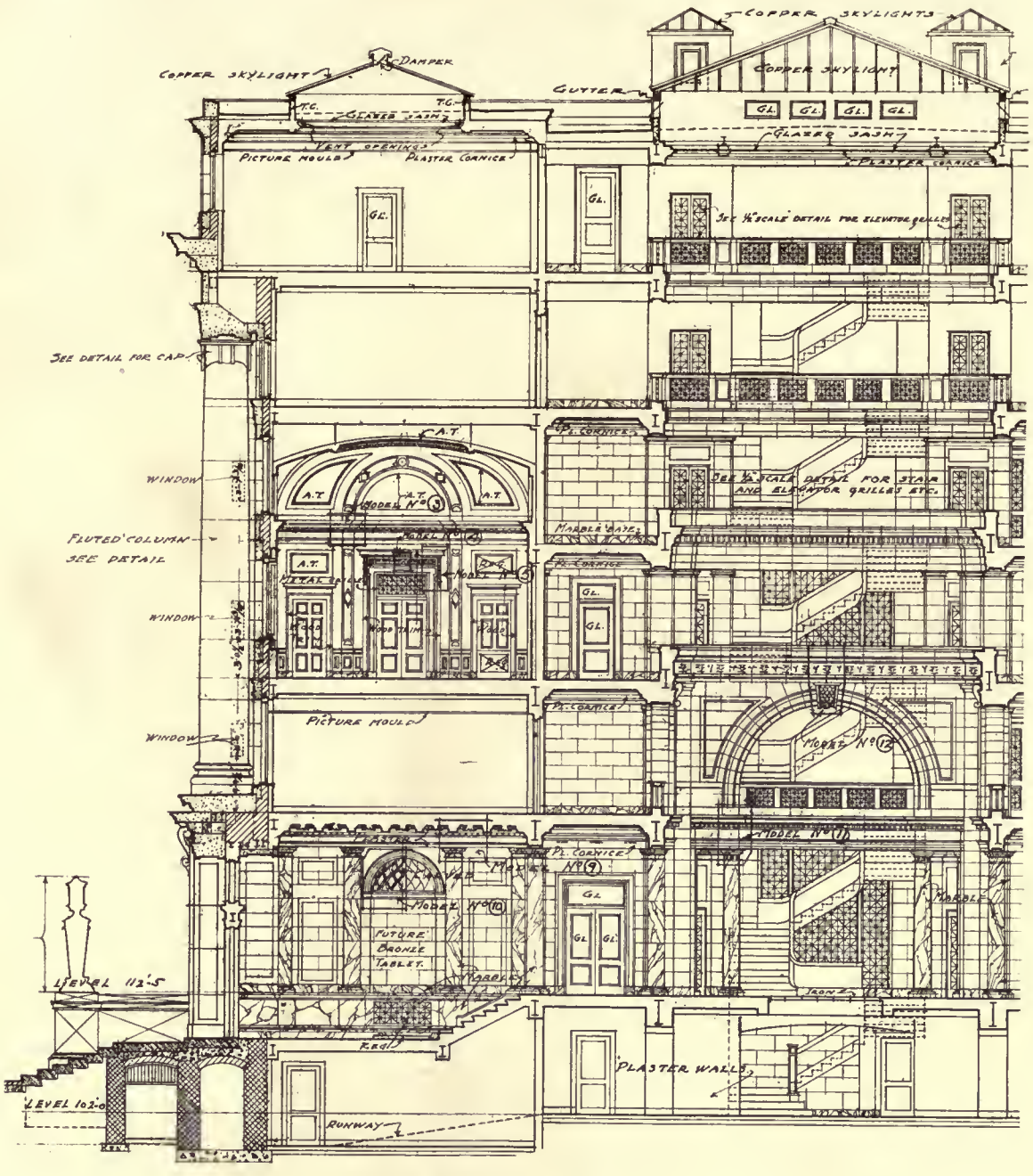
VOL. CXI, NO. 2163 JUNE 6, 1917



LONGITUDINAL SECTION, LOOKING NORTH

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*



CROSS SECTION, LOOKING EAST

WESTCHESTER COUNTY COURT HOUSE, WHITE PLAINS, N. Y.

MR. BENJAMIN W. MORRIS, *ARCHITECT*

THE AMERICAN ARCHITECT

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The Annual Fire Loss

ACCORDING to statistics compiled by the National Board of Fire Underwriters the fire loss in the United States for 1916 was $214,530,995, or $2.10 for every man, woman and child in the country. Carelessness was the cause of a great proportion of this loss.

At any time such an enormous loss and its demonstrated preventability is something that it is difficult to patiently consider. At this moment, when we are at war and when every resource we can command is absolutely necessary to secure a successful issue, we are forced to the opinion there should be a revision of our laws to an extent that would make a careless act leading to a fire loss as proportionately criminal as an actual act of incendiarism.

The chairman of the Underwriters' Committee on statistics and origin of fires, urges the National Board to "conduct a vigorous campaign to make Americans understand the wickedness and folly of the national habit of carelessness and neglect as applied to fire risks."

The New York *Sun* in commenting on this recommendation states: "Folly and wickedness are strong words, but not too strong to describe the preventable destruction of property caused by carelessness and neglect of elementary precautions in the house and in the factory."

It seems impossible of belief that, after years of hard work and well-directed effort on the part of boards of fire underwriters, fire protection societies, and the constant surveillance of what are probably the best organized fire departments in the world, that it should be necessary to record an enormous and annually increasing fire loss.

It begets a sense of irritability to learn that so large a proportion of this loss is due, as the *Sun* states, to "a neglect of elementary precautions."

For this reason, if no other, it would seem that the evidently large number of our population should be visited with the same consequence for these acts of carelessness as for those hardly less criminal in their results and regarded as justly-punishable offenses.

When there have been laws enacted carrying severe penalties for acts of carelessness as affecting fires, and these vigorously enforced, there will be a material reduction in the fire loss in this country, and not until such laws have been passed can we be said to have made any very great advance in this direction.

There can be nothing revolutionary in the idea that an individual is responsible to others for his acts, nor has there any good argument been advanced why this principle should not be applied in the case of fires.

While, for example, there are no special laws in France or Belgium relating to fires, there is, nevertheless, a police inquiry into every fire in cities or towns. According to the Code Napoleon, every person is responsible and liable for any acts of his by which any person has, or may have sustained loss, damage or injury.

The interpretation of this article has included every act as relating to fires. Nor is there any limit to the liability.

In Germany the liability of responsibility for fires and the resultant loss or damage is even more strictly enforced. The effects of these enforcements are to be seen in the comparatively small fire losses.

With special reference to the present daily fire loss and its effect at this time, the National Board of Fire Underwriters, in a strongly worded address, states:

"Every day furnishes increased evidence that the world is racing with starvation. It is a crime against humanity to allow the usual percentage of fires in grain elevators and other places of storage to be continued. The National Board, therefore, has been working out extensive plans for providing fire protection, as distinguished from mere fire indemnity, for all elevators, flour mills, potato and onion warehouses, and other food repositories in the United States. . . .

"The vast annual loss of food staples through fire has long been recognized as very largely preventable,

but there never before has been such an opportunity for bringing about a widespread campaign of conservation. The successful fruits of this campaign should preserve the living for unnumbered thousands whose food requirements would be destroyed were the fire loss to remain as usual."

At this time the United States is the source of the largest part of the world's supply. It is vitally important that this supply should not be diminished by losses from fire. It is therefore a part of every man's patriotic duty to lend his aid by co-operation with those who have undertaken this great task of fire prevention. Again to quote from the address referred to:

"It is of the utmost importance that every individual in the nation should consider himself as a committee of one to co-operate in the removal of all unnecessary fire hazard that may come within his knowledge. The urgency of this need is paramount."

It is not the hysterical or boisterous demonstration of patriotism that indicates how earnestly we are striving towards a victory that we feel is essential to the world's welfare, but the serious attention to appeals like the above and ready co-operation along lines that are indicated by men schooled in the things they urge, that will carry us quickest and straightest to victory.

"The Thirteenth Floor"

THE fact that a London householder had filed with the County Council a request to be permitted to change his house number from 13 to 12A moves the *Architects' and Builders' Journal* to remark that "silly superstitions are rampant among a public that wears 'charms,' pampers 'mascots' and pours wealth into the laps of palmists and crystal gazers." The County Council refused the request.

One of the incomprehensible things in our present civilization is that in spite of widespread knowledge and its easy accessibility there should survive the superstitious beliefs that are everywhere prevalent.

It has been claimed that superstition is an attribute of ignorance, but every man from his own observation knows this is not true. Every architect has at one time or another been compelled to combat the superstitious tendencies of clients, and everyone who has designed a tall building will know that there has been debated the question of omitting the supposedly unlucky thirteen in designating the floor numbers, and that in many instances the number thirteen has been omitted in order to satisfy the superstitious fears of prospective tenants who inconsistently consent to occupy a thirteenth floor under the false numbering of the fourteenth. Many of our large hotels not only omit the thirteenth in numbering the floors, but on each floor also omit 13 in numbering the rooms.

That this dread of the number 13 is carried to a most foolish extreme is further commented on in the editorial above referred to, which states: "We know, for example, of a house of which the rent had to be lowered because of the reluctance to inhabit it on the showing that No. 175 is essentially $1 + 7 + 5 = 13$, which is mere foolishness, but seems to have been turned to account, to the detriment of the landlord."

The metaphysics of the beliefs and usages of a people have formed the basis of specialized study and research. It is a historical fact that the daily lives of ancient people were ruled in their religious aspect by the interpretation of natural phenomena, which were by the priests construed as omens. Where such correlated beliefs exist they may be regarded as survivals or relics of a past, the influence of which, in spite of intervening centuries and the great spread of knowledge, has yet a strong hold on the minds of peoples and in a greater or less degree influences their activities.

The banality of superstition should be so evident to the educated mind that it is difficult to understand its hold upon those to whom we would naturally look for a broader view.

To refer again to the ominously regarded 13, architects will probably be too busily engaged with more important matters and will not waste time in efforts to convince clients of the fallacy of their belief in the "unlucky thirteen." So we shall continue to regulate the use of this number in designating rooms and floors to meet the wishes of clients until that day arrives, probably far distant, when superstitious beliefs will not so largely rule our daily conduct.

A STREET IN PÉRONNE AS THE GERMANS LEFT IT.

(From The Architectural Review)

The Foreign Architectural Press

A REVIEW of the foreign architectural press narrows down practically to the English periodicals. Among a large list of European exchanges, they have, with the exception of the London journals, ceased to reach us. In one case particularly, the situation is pathetic. *La Constructione Moderne,* at one time a large and dignified publication, has shrunk to a mere pamphlet. We learn that its usual form is temporarily suspended, owing to the absence of the editors at the front. A few comments are to be found in this leaflet, and there is in each issue the page devoted to the names of men in the profession who have met death on the field of honor.

In the English papers, the one absorbing topic is the War, and the part played by men of the profession. In every issue we also find the obituaries of architects who have gone forth to battle and to death.

The price in men of ability or great promise in the architectural profession that England and France has paid since this war began is enormous, and we can only hope that the end of strife is near, and that, with the entry of the United States, it may be possible to bring the matter to a speedy conclusion.

The April *Architectural Review* has an article descriptive of "The Sack of Péronne," and a number of illustrations that show how thoroughly the work of destruction has been accomplished. The article states:

"The place is an absolute ruin, and not brought to this sad state through the ordinary course of battle, for the French and British armies had spared the town as much as possible, but its buildings maliciously sacked by the Germans in the same spirit as prompted them to cut down fruit trees and to poison wells. On the Hôtel de Ville, after they had blown it up, they fixed a board bearing the words, 'Nicht ärgern, nur wundern,' which may be translated as 'Don't get angry; just wonder!'

"Writing on the day after our occupation of the town, the special correspondent of the *Times* says: 'There is not much evidence of shell fire. I could not find a shell hole in the roadway of the Grand Place. But there is not in Péronne one habitable house. The Boche has blown out the fronts of most of the buildings. The others he has burned.'

"Such is the record of what the German army has done once more in the name of 'military necessity.' It is but the record of Belgium over again, and seeing the ruin they have left behind them in their recent retirement, one is left with the sure conviction that the same vandalism will be perpetrated as the Boche is

THE RUINS OF PÉRONNE (HOTEL DE VILLE ON THE LEFT).
(From The Architectural Review)

forced back and back out of the countryside on which he thrust his dreadful presence.

"Péronne is but one of the many little towns that have shared the same fate."

TYPICAL HUTMENT IN AN ENGLISH MILITARY CAMP.
(From Architects' & Builders' Journal)

In sharp contrast to the horrors of war, is an article in an earlier issue on "An Unspoiled English Village." This is the quaint old town of Thaxted, in Essex, which dates back to the days of Euleric, the Saxon Thane.

It is a satisfaction to note the veneration with which these old towns are regarded, and how jealously they are protected from the hand of the modern "restorer." The author of the article, W. H. Cowlishaw, states:

"There is a subtle and scarcely recognized difference between such a village and the modern garden city. The one, of slow growth, clear on the face of it, belongs entirely to the current necessities, expressing the Adam-like wrestling with the soil and the elements, and yet clothed withal in a seemly and pleasant guise. The other is fungus-like, dumped down anywhere, with at least a factory as a nucleus, producing something entirely alien to the soil and district, around which the habitations of the workers accumulate on a preconceived plan, irregular and self-consciously picturesque, or, what is better, formally and frankly planned as an intellectual exercise. It is worse than useless to attempt to imitate the age-long growth of these ancient places, which have come down to us as precious heirlooms, and should be preserved for the benefit of future generations as a national heritage."

A TYPICAL SLEEPING HUT.
(From Architects' & Builders' Journal)

A writer in *The Architectural Review,* preliminary to a discussion of some recent English domestic architecture, is of the belief that "Architecture, from the time of the Greeks onward, has been a record of constant borrowing."

He states:

"There is a right and a wrong way of 'borrowing,' just as there are right and wrong subjects to 'borrow.' Nobody who cares to think for a moment will maintain that there is any reason or merit in 'borrowing' from the undeveloped styles of the past. Much of the Tudor and Elizabethan domestic work, for example, is frankly uncouth. We know perfectly well that it is largely the work of people who did not properly understand what they were doing. Comparing it with the model from which it derived its ultimate origin, we may the more easily understand its real significance; and we thus come to realize that this transitional and undeveloped work is only interesting from the historical point of view."

And again:

"But while it is not desirable to 'borrow' from immature work, it is perfectly legitimate to take and adapt the forms of a mature and finished style. In the eighteenth-century work of our own country we have a model that might well be taken as an exemplar of domestic architecture. It is admirably adapted to modern conditions and requirements, and it seems to combine within itself many of the qualities that go to make up the quiet serenity of typical English home life.

"As we have now become sufficiently broad-minded to admit the legality of 'borrowing' from the past, why should we not 'borrow' thoroughly? To some men the idea of borrowing in any shape or form is altogether repugnant. They would sooner do something bad

THE BYPATH ENTRANCE, THAXTED, SUSSEX.
(From The Architectural Review)

BOLFORD STREET—THAXTED, SUSSEX.
(From The Architectural Review)

which they could call their own than something really good which might lay them open to the charge of plagiarism. It is this close preoccupation with the personal which is responsible for much that is amiss in modern work."

A problem that seriously confronted England on the outbreak of the war was the provision of hutments for the great armies being organized. It became necessary to undertake the construction of hutments on a large scale, and the problem, it is believed, has been satisfactorily solved. As this is a feature that will probably demand considerable attention on the part of our own Government, and second in importance only to the question of military hospitals, an article in *The Architects' and Builders' Journal* of London, of April 18, on "Military Hutments," has considerable present interest. An exterior and interior view of one of the hutments illustrated is reproduced.

In the same journal (issue of April 11) there is illustrated St. George's Hall, in Liverpool, one of a series of monumental buildings being published in this magazine. This building stands as a monument to the architectural genius of Harvey Lonsdale Elmes, who, although a Londoner, built nothing in London, but only in Liverpool. He died in 1847, at the age of 35 years.

It is particularly interesting to learn that in 1856, or nine years after Elmes' death, Liverpool's admiration for his work, and the fact that he had not lived to see the completion of his great hall, led to the raising of a fund, the income of which was devoted to the support of Elmes' widow.

The Architect and Contract Reporter, London, in an editorial in its issue of April 13, urges the creation of the office of a Ministry of Health. It states:

"In the light of further experience and thought we have now come to realize as conditions conducive to pauperism bad housing, deficient light and air, hygienic ignorance, and the neglect of incipient weakness and disease in the youthful subject. We realize, moreover, that the crippling of every worker affects the State, not only with the cost of his maintenance, but with the sacrifice of his productive power—that the communal fisc, in the widest sense, has not only incurred an expenditure, but lost a revenue.

A RECENT EXAMPLE OF ENGLISH DOMESTIC ARCHITECTURE

WEST HOUSE, ST. ANDREWS, MILLS & SHEPHERD, *ARCHITECTS.*

(From The Architectural Review)

"Already, before the war, far-sighted employers of labor have realized that dividends depend upon the health and happiness of their employees, and that these in turn are promoted by such improved housing conditions as are to be found exemplified in Port Sunlight and Bourneville, the beneficial effects of which upon their inhabitants have been proved beyond gainsaying by careful comparison between the school children of these model communities and corresponding residents in the neighboring cities of Liverpool and Birmingham.

"The influence of healthy conditions upon the efficiency of workers has been overwhelmingly demonstrated at the present time by the experience of the Ministry of Munitions, with its two million employees working and worked with the aim of the highest possible output under the strenuous call of manufacture for war."

Not only on the score of humanity, but also on that of expediency, the health of a nation should be of primary concern to its government.

The great many "boards" and "commissions" that are supposed to regulate these matters in the United States are in a sense overlapping, and lack any central controlling power.

SOUTH PORTICO, ST. GEORGE'S HALL, LIVERPOOL.

(From Architects' & Builders' Journal)

A ministry, such as is urged in this article, would be a valuable addition to our present Government, as it would to that of England. The economic

A LONDON BANK INTERIOR.

DUNN, WATSON & CURTIS GREEN, *ARCHITECTS*

(From Architects' & Builders' Journal)

aspect of public health is one that has not been as fully considered as might appear necessary, and it has only taken the outburst of war to demonstrate this truth in many ways.

It is estimated that the rebuilding of France and Belgium alone will require the equivalent of the entire annual lumber production of the United States and that the foreign demand will be limited only by ship carrying capacity after peace is declared.

Westchester County Courthouse

MR. BENJAMIN W. MORRIS, ARCHITECT

THIS building is approximately 200 ft. long and 100 ft. deep, and is free standing across the northerly fronts of the recent additions and of the old county courthouse. It is seven stories in height and has been designed so that two additional court rooms may be constructed when the present accommodations are outgrown. The principal front faces Main Street. Monumental character and distinction from the commonplace have been attained rather by dignity of proportion than by overstressing of ornament, which has been used sparingly and with discretion, being conspicuous principally by its absence, but the greatest care and attention have been paid to the study of proportion, detail of mouldings, etc. Twelve fluted free-standing Ionic columns, extending from the second floor level nearly to the fifth story ceiling, decorate the front, and are effectively terminated by robust wall surfaces at either end. The principal approach is a broad and easy system of steps arranged in easy terraced flights, and leading to the severely-classic triple main entrance. This is embellished by carved medallions of Tennessee marble, into which are incorporated the seals of the county and State. In addition, two supplementary entrances serve the ground floor at either end, as well as two private entrances for judges, with their stairways, and the various means of covered communication with the older buildings on the south.

From the main entrance vestibule a few broad, easy steps lead to the spacious central court beneath the light well, the focal point of the building, around which is a complete system of corridor circulation, and from which are served the quarters of county treasurer, surrogate, comptroller, public waiting rooms and covered passageways to the other buildings. Conveniently situated are also the two groups of main stairways and elevators, two cars only out of the ultimate four being installed at present. These, with two enclosed service and fire stairs and the two judges' stairs, provide ample and safe means of vertical communication.

There is not a dark room in the building, all having outside light and air, while the corridors are broad and simply arranged and adequately lighted.

The walls of public spaces are generally faced with Travertine marble, while the court rooms are paneled in quartered oak with an ingenious system of acoustical treatment, securing freedom from noise and reverberation and assuring the tranquility required for court procedure.

The four Supreme Court rooms are at the east and west ends of the building on the second and

fourth floors, with all customary appendages conveniently arranged. They are spacious, lofty, well lighted, and are heated and ventilated in the most approved manner.

The disposition of the court rooms made possible a very convenient arrangement of the district attorney's quarters which, with the grand jury room, occupy the entire third floor.

The Supreme Court library extends across the front of the building on the fifth floor, and from the stack room two book lifts bring the courts into close and rapid contact with the library.

All structural features of the building are of fire-resisting material. The foundations are of reinforced concrete. Exterior walls are self-supporting, of brick, and stone from the old building, faced with cut cast granite, made in Tuckahoe. The floors, stairs and skylights are carried on steel construction, floor slabs being of reinforced concrete, and all partitions are of brick or hollow tile.

FRONT ENTRANCE

Brooklyn Chapter A. I. A.

At no time have the activities of this Chapter been more marked and never have they been directed along lines that look to larger and more valuable achievement.

The annual meeting and annual dinner were held on May 28th, and both were largely attended.

At the meeting the President was empowered to appoint a special Committee on Housing and Town Planning, to co-operate with the committees of the A. I. A., the New York Chapter and other similar organizations.

In efforts that relate to the services of architects and draftsmen in war time, this Chapter is rendering patriotic assistance. It has taken an active part in the enrollment of volunteers for Government Service. If called upon for special emergency work it will undoubtedly be found ready for any assignment.

As an example of patriotic service in but one office the following copy of a letter received in response to a notice sent out by the secretary regarding enlistment in the National Guard, is of considerable interest:

May 23, 1917.

Mr. Carroll H. Pratt, Secretary,
Brooklyn Chapter A. I. A.,
103 Park Avenue, City.

Dear Sir: With reference to your letter of May 21st, would say that one member of our firm is already a Lieutenant of Engineers, another member is going to the training camp for officers, one of the draughtsmen is a member of the First New York Cavalry, Squadron C, and another draughtsman is going to enlist in the Regular Army.

Respectfully yours,
(Signed) John B. Snook Sons.

Judging from the report of the Committee on Public Improvements, this Chapter takes not only a vital interest in local buildings and public works, but is equally keenly alive to the necessity for a watchful interest over every similar activity in the State and Nation.

This admirable report indicates how thoroughly the Brooklyn Chapter is alive to the importance of things that concern it.

A very valuable suggestion is made as to the proposed erection of a State office building at Albany.

The report states:

The State requires increased space in Albany for the various departments, and it is proposed to acquire the land west of the Capitol for the purpose of erecting a State office building and for a park between it and the Capitol. This seems like a piecemeal proposition, and it would be better that a comprehensive plan for the Capitol development should be worked out to include the property on the south side of State Street as well as the property which it is proposed to take, so that additional buildings could be erected there to balance the Educational Building. The proposed park greatly increases accommodations, and it is now proposed to erect several large department buildings; and it is hoped that the rush to get these buildings will not result in their being improperly placed or of a design out of keeping with the best development along the approved plans of the City.

In its reference to the evident intention of the Government to proceed with the erection of a proposed power plant in Washington, although this project has been the subject of vigorous protest on the part of all the leading artistic societies in the country, the report of this committee states that it is clearly the duty of architects to prevent any hasty or ill-advised action in the location and design of buildings to be erected during the stress of war preparation, and to preserve the plan of the Capital as recommended by the Commission, and which has had the approval of the Institute.

Officers of the Brooklyn Chapter elected for the ensuing year are as follows: President, Carroll H. Pratt; Vice-President, George H. Streeton; Secretary, Alexander Mackintosh; Treasurer, John B. Slee; Surveyor, Robert H. Bryson.

E. L. Masqueray Dead

Emmanuel Louis Masqueray, architect, died at his home in St. Paul, Minn., on May 26th.

Mr. Masqueray was born at Dieppe, France, September 10, 1861. He was educated at Rouen and Paris. He studied at the Ecole des Beaux Arts, Paris, and in 1879 was awarded the Deschaumes prize by the Institute of France. He also received the Chandesaigues prize in 1883. While in Paris he was also an Attaché of the Commission des Monuments Historiques. Mr. Masqueray came to New York in 1887, and was at first connected with the office of Carrere & Hastings, and later in the office of William M. Hunt. He moved to St. Paul in 1893, in which city he practised his profession up to the time of his death.

Chicago Architectural Club

The following officers were elected at a recent meeting of the Chicago Architectural Club:

Fritz Wagner, Jr., president; John C. Leavell, vice-president; Frederick C. H. Stanton, treasurer; Robert L. Franklin, secretary.

The Illinois Society of Architects

NOTES OF INTEREST GLEANED FROM THE MAY BULLETIN

The much debated question, both in the general and architectural press, as to the necessity of State architectural offices, is being considered by the Illinois Society of Architects, by a special committee appointed at a recent meeting.

* * *

The Illinois Council of Defense has recommended that the Congress of the United States be urged to enact at once a rigid and comprehensive food, fuel and commodity act that will vest in a commission to be appointed by the president full power (subject to appropriate safeguards) to regulate and control the production, distribution, transportation and price of foodstuffs, grains, fuel and other basic commodities.

* * *

The president of the society has appointed the following committee to consider the architectural work of the State of Illinois as per the resolution adopted by the society at its April meeting:

Dwight H. Perkins, chairman; D. H. Burnham, Jr., N. Max Dunning, Elmer C. Jensen, Albert Moore Saxe.

* * *

Recently one of the largest corporations in Chicago determined to make a large addition to its already extensive warehouse. The original building had been designed and supervised by one of the leading architectural firms in the United States, but when the new extension was determined upon the officers of the firm thought that by organizing their own construction department they would be able to save a portion of the 6 per cent architects' fees. They, therefore, employed an architect on a salary who had been licensed by the State less than one year and employed an engineer to design the reinforced concrete work.

After the plans had all been prepared and had been signed and sealed by the architect, the architect was given some other work which took him away from the office for a few days, and during his absence his name and seal were erased from the plans and the plans were sealed by a licensed structural engineer and the permit issued on said plans.

The editor of the Bulletin is advised that the architect whose name and seal had been erased is still in the employ of the corporation. It might be added that the building does not fall within the limitations described in Section 12 of the structural engineers' act.

Query: What are the architects going to do about this and similar instances of the very evident intent on the part of engineers to overstep the privileges contained in their act?

In this connection, it is well to remember that the State Board of Architects have ruled that it is dishonest practice for an architect to sign and seal plans for buildings not made by him or under his direction and that the State Board of Examiners of Structural Engineers have ruled that it is *not* dishonest for an engineer to sign and seal plans not made by himself or under his direction. In the interest of fair play, it is to be hoped that the constitutionality of the engineers' act will be soon tested in court. Until this has been done, neither architect nor engineer will know what the engineers' bill actually does provide for.

The Lincoln Highway

As a coast-to-coast road in time of war the Lincoln Highway presents many advantages. That these are appreciated by the Government is proven by the fact that a party of engineers of the United States Army are engaged in making a survey of the Highway to determine all its possibilities as a route for transportation of supplies and bodies of troops. It is learned from the Lincoln Highway Association, whose headquarters are in Detroit, that since the declaration of war there has been a revival of activity in every section traversed by the Highway and that each State has been aroused to the great importance of the undertaking and is acting accordingly.

Forest Notes

Balsa wood, found in Central America, is said to be the lightest known wood. It is lighter than cork and has an average specific gravity of only 0.104.

A wood specimen found in glacial drift and estimated by the Wisconsin State geologist to be approximately half a million years old has been identified by the Forest Products Laboratory of the Forest Service as spruce.

State forests, with a total of over 3,600,000 acres, have been established in thirteen States. Of these New York has the largest forests, which comprise 1,826,000 acres; Pennsylvania is second with 1,008,000 acres, and Wisconsin third with 400,000 acres.

Mr. Roland C. Buckley of Minneapolis and Mr. E. Paul Prins, formerly of Chicago, Ill., announce the forming of a co-partnership for the practice of architecture, with offices at 252 Plymouth Building, Minneapolis.

Idaho Adopts Registration Of Architects

The following summary of the recently enacted Registration Law in the State of Idaho is reprinted from the May issue of *The Western Architect:*

The Legislature of the State of Idaho has passed an act "to provide for the licensing of architects and regulate the practice of architecture." The State Board of Examiners is to consist of five members, one a member of the architectural or engineering departments of the State University, and four architects who have been in regular practice for five years. The term of office is four years, two of the first appointments to expire in two years to secure a two-year alternation. Vacancies, as well as regular appointments, are made by the governor. The examination fee is $20, and is retained whether the candidate passes or not. The license fee is $20, and each practicing member of a firm must have a separate license. The salary of the secretary-treasurer is $500, this and other expenses to be paid from the Board's receipts. Those with school diplomas and three years in practice, who have licenses in another state, and those in practice before the passage of the act, are eligible to registration without examination, the fee being the same as in examination cases. Any person can file plans for buildings that are not prepared by a person "known or styled as an architect," and there is nothing in the act to prevent any builder, or others, from making plans for a building "that is to be constructed by himself or his employees." A civil engineer is not considered an architect "unless he plans, designs and supervises the erection of buildings, in which case he shall be subject to all the provisions of this act and be considered an architect." The penalty for practising or advertising as an architect without having first secured an architect's license is from $50 to $200, or, in default, imprisonment until the fine is paid, allowing $2 for each day of imprisonment.

Fire-Retardant Paint Said to Have Been Developed

The Paint Manufacturers' Association of the United States and the National Lumber Manufacturers' Association believe that the secret of how to make a paint that will render shingles almost unburnable has been discovered. A series of tests made in St. Louis, at the laboratory of Dr. Hermann von Schrenk, before representatives of both associations, showed that the new fire-resistant paint devised by Dr. Gardner of the Institute of Industrial Research gives wonderful results. Dr. von Schrenk has devised a strong fire test which burns through a new, first-class untreated cedar shingle roof every time it is applied. Roof sections, composed of the same kind of shingles, covered with the new paint, proved resistant to this extreme test.

It is believed that this discovery will eventually mean much to the timber-producing States and to the home builder, now debarred from inexpensive construction by city fire ordinances.

Stepped House Fronts

For reasons best known to themselves, our forefathers were wont to build their houses with overhanging stories. Some modern Paris architects, MM. Sauvage and Sarazin, are reversing this method, for they have built in the Rue Vavin a house in which each successive floor is set back several feet, with the object of giving better access of light and air to the lower stories, and of causing less obstruction to the ancient lights on the opposite side of the street. Here we scent danger. Opponents of reform of the laws as to light and air in this country, driven from their present untenable position, may seek refuge in the compromise suggested by the stepped house, which is itself a sort of compromise on the tiers of streets imagined by someone who, struck by the ingenuity of the Rows at Chester, where one walks on top of one row of shops to view a second row, yearned for an extension of the principle. The mediæval builders of Chester, it is argued, would have pushed the idea to a logical conclusion (at the top story) if only the sweet uses of the passenger lift had been known to them. With street piled above street, shop-front above shop-front, the shopkeeper could realize the ideal for which his soul craves—an entire front of unbroken (generally speaking) glittering glass, which should also gratify the architectural sense of propriety because the "acres of glass" will no longer seem to hold up tons of heavy upper stories, but only the final fascia. Thus the stepped house will solve several problems. But it will also create several others. Think of the effect of an entire street of stepped buildings, one side of the road recoiling from the other as in horror at a row of protruding chins and receding foreheads!—Architectural Review (London).

The next annual meeting of the National Housing Association will be held at the Hotel La Salle, Chicago, Ill., from October 15 to 17, 1917. Further information may be obtained by addressing Mr. Lawrence Veiller, secretary of the association, 105 East Twenty-second Street, New York City.

Second Class Mail Zones

That the opposition to the proposed zone system for second class mail is not centered among the larger number of publishers throughout the country is shown by a report of a special committee of the Merchants' Association of New York, which states in part:

The enormous growth of periodical publishing has been made possible solely by the existence of a moderate charge for postage, without which a low subscription price and general distribution would have been impossible. Through this channel is diffused the widest possible range of knowledge of the utmost value in its educational effect. To the most remote hamlet, to millions of isolated individuals are brought, through the medium of low-price publications, the latest and most complete knowledge of scientific achievements, of practical application of the arts, of innumerable practical details in the field of industry and commerce, all of which promote the intelligence of the individual and serve as the medium of national education. It is because of the public purpose thus served, the purpose of immeasurable benefit to the people and one of the chief instruments of national homogeneity, that a low rate upon newspapers and periodicals is not only justified but demanded as a national benefit.

Moreover, the enormous extent to which this educational medium has been developed has resulted in a large accretion in the revenues from first class postage. The advertisements that are contained in a very large proportion of periodicals are not a source of loss to the Government, no matter how low the rate of postage may be, for the reason that those advertisements result in an enormous increase in the volume of first class matter which pays many-fold the cost of its own transportation and of the transportation of such second class matter. Without the existence of these periodicals, in which advertisements constitute a considerable part, the volume of revenue from first class matter would be very much less than at present, as a large portion of the most profitable part of the Government's postal business arises from and is the direct outcome of the advertising pages of the periodical press.

Long-leaf Pine

An attractive pamphlet has been issued by the Jackson Lumber Company, Lockhart, Alabama, to direct attention to Long-leaf Yellow Pine Rift flooring. Not only are the various purposes to which this wood is adapted in building construction set forth, but there are also included an attractive series of free-hand pencil drawings of the different stages in the production of this very useful wood, and also an interesting account of the locations in which it is produced.

These pamphlets will be forwarded to architects upon application.

Lumber Production in 1916

A total computed lumber cut for the United States in 1916 of 39,807,251,000 board feet is announced by the Forest Service. This figure is based on reports received up to April 15, from 17,201 sawmills out of the 30,081 believed to have operated last year. It is estimated that the actual cut was slightly in excess of 40 billion feet. An earlier estimate, based on partial reports, indicated a total output of 41¾ billion feet. The figures now given are regarded as practically final.

The State of Washington was again the largest producer with a lumber cut of 4,492,997,000 ft.; Louisiana was second with 4,200,000,000 ft., and Mississippi third with 2,370,000,000 ft.

Southern yellow pine with a total of 14,975,000,000 ft. forms 37.6 per cent of the entire cut. Douglas fir, its nearest competitor, is credited with 5,416,000,000, while oak, with a cut of 3,500,000,000, is third.

INDUSTRIAL

New Officers of Sargent & Company

At the annual meeting of Sargent & Company, New Haven, Conn., held on May 17th, Wilfred Lewis and Ziegler Sargent were elected as directors of the company, and the following members of the board of directors were re-elected: Henry B. Sargent, Edward R. Sargent, Joseph D. Sargent, G. Lewis Sargent, John Sargent, Bruce Fenn and George F. Wiepert.

The new officers of the company are as follows: President, Henry B. Sargent; Vice-President, G. Lewis Sargent; Secretary, Murray Sargent; Treasurer, Ziegler Sargent.

Nonpareil Corkboard Insulation

The Armstrong Cork and Insulation Company, Pittsburgh, Pa., has issued a small booklet on the insulation of cold storage rooms. The importance of proper insulation is discussed at some length, and the properties which a satisfactory insulating material should possess are listed as follows: It should be a good non-conductor of heat; non-absorbent of moisture; durable in service; sanitary and odorless; compact; structurally strong; slow-burning and fire retarding; reasonable in cost.

It is claimed that Nonpareil corkboard combines to a remarkable degree these principal requirements, and considerable space is devoted to a presentation of evidence to that effect.

Copy of the booklet may be had upon request.

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VIA BALBI, GENOA

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, JUNE 13, 1917 NUMBER 2164

SETTING OF CHORUS

NEW YORK CITY SONG AND LIGHT FESTIVAL, SEPTEMBER 13, 1916

An Art of Light

By CLAUDE BRAGDON

IN the art of music, man has organized sound into a language rich in beauty, pregnant with emotion: light, a more potent medium, awaits a corresponding transmutation.

The sphere of sound is the earth-sphere: the little limits of our atmosphere mark the uttermost boundaries to which sound, even the most strident, can possibly prevail. But the medium of light is the ether, which links us with the most distant stars. May not this fact be a symbol of the potency of light to usher the human spirit into the realms of being at the doors of which music itself shall beat in vain? If we compare the terrestrial universe accessible to sight with that accessible to sound—the plight of the blind man compared with the deaf man's—there is the same discrepancy: the field of the eye is immensely richer, more various and more interesting than that of the ear. The things which reflect light have been organized esthetically into the arts of architecture, painting

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and sculpture; but light itself has never yet been thus organized.

It is true that in the theater painting with light has supplemented to some extent the painting with pigment; "color-organs" have been constructed, as far back as the days of old Barnum's Museum; colored light was used to illuminate the buildings of the San Francisco Exposition; but a veritable art of light—an abstract art whose changing ebb and flow on a background of darkness would speak to the soul as music on a background of silence speaks —is still unborn, though quickening in the womb of the future.

The scientific development and control of light has at last reached a stage at which a new and wonderful medium of expression is placed at the disposal of the creative artist, but no creative artist in light has yet appeared upon the scene. Its manipulation has been in the hands of "illuminating engineers" and its exploitation in the hands of advertisers. Some measure of the wonder and enchantment inherent in this medium may be gathered from the fact that, unlike music, it *cannot be vulgarized*. The sky signs of upper Broadway in New York and the Lake Front in Chicago, a carnival of contending vulgarities, both in form and content, are in effect amazingly beautiful, though without co-ordination and without the aid of any artistry other than the most puerile. It is impossible to overestimate the degree of augmentation of this beauty if delivered into the hands of the artist to deal with, and dedicated to noble ends.

Color is a continent discovered, but unexplored, unconquered. Nothing in color knowledge and analysis analogous to the established laws of musical harmony is part of the equipment of the average artist—he plays, as it were, by ear. The scientist, on the other hand, though he may know the spectrum from end to end in its thousand and one different variations, values this rainbow "promise of the Lord" as a means to knowledge and not for its own beautiful sake. Mutual indifference, mutual distrust, mutual scorn, keep the artist and the scientist from helping one another. To the average man color says nothing: to him grass is green, snow is white, the sky is blue, and to have his attention called to the fact that sometimes grass is yellow, snow blue and the sky green, is more disconcerting than illuminating. It is only when his retina is assaulted by some splendid sunset or sky-encircling rainbow that he is able to disassociate the idea of color from that of substance and of form.

Now just as the art of music has not only provided the emotional subjective self with a medium of expression, but has also developed the bodily organism into a finer instrument than, without music, it would have been—witness the sensitivity of the ear of a great orchestral conductor, of the hand of a great violinist—so an analogous art of light would not only orient the human spirit in new directions, but it would educate the eye to perceive nuances of color to which it is now blind.

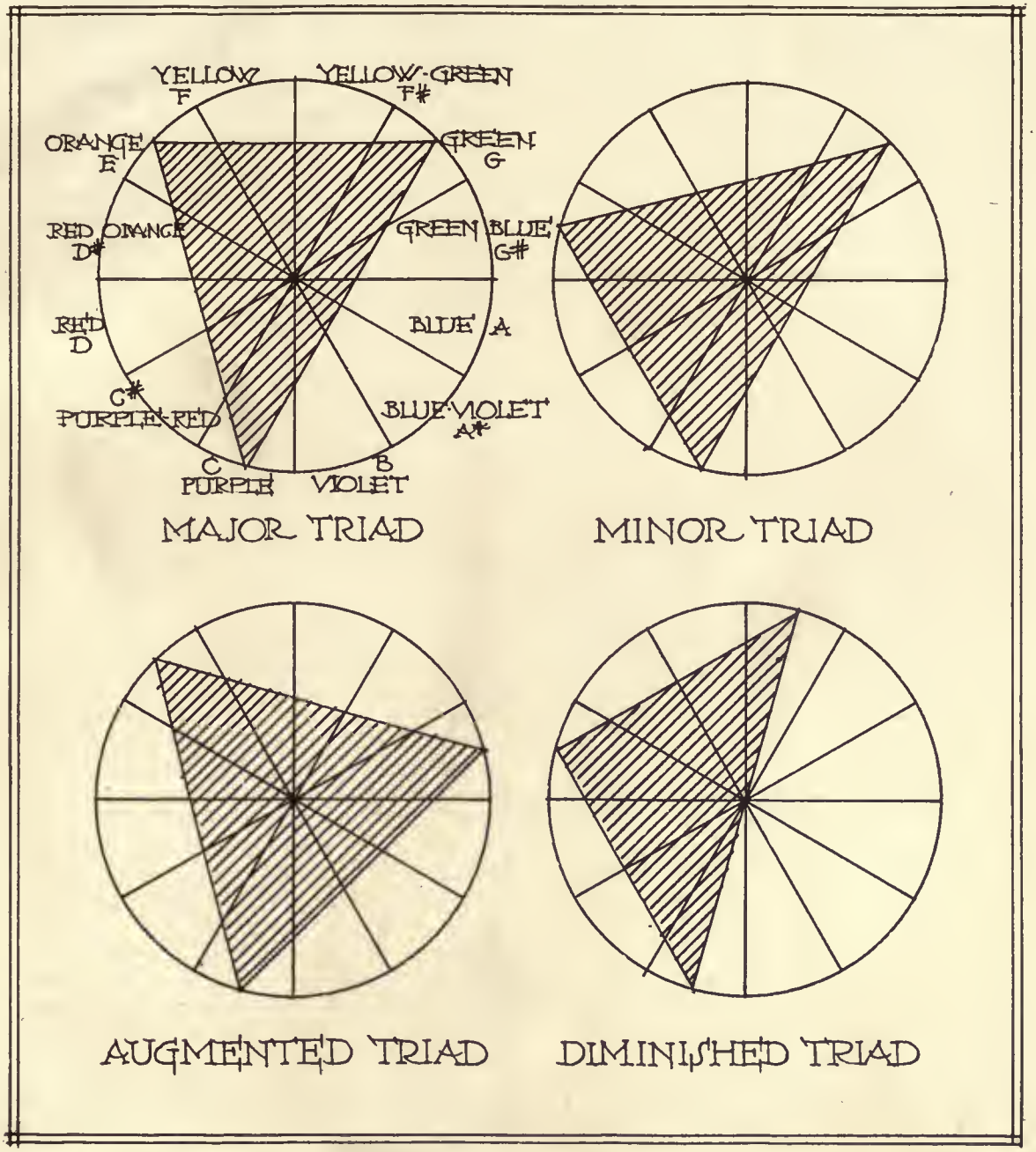
It is interesting to speculate as to the particular form in which this new art will manifest itself, what phases it will pass through, on the road to what perfections. The first of these questions is perhaps already answered in the color organ, of which several examples have been shown. However, it may well be questioned whether any arbitrary and literal translation of a highly developed, complex, mobile art, unfolding in time, such as is music, into a light and color expression, is the ideal method to bring about the desired result. We have a deep and abiding consciousness, justified by the history of esthetics, that each art form must progress from its own beginnings, and unfold in its own unique and characteristic way, and that the correspondences between the arts—such correspondences, for example, as inspired the famous saying that architecture is frozen music—reveal themselves after the sister arts have attained an independent maturity. These correspondences owe their origin to that underlying unity upon which our various modes of sensuous perception act as a refracting medium—they must be taken for granted. To attempt to solve our new esthetic problem by a literal translation of music into colored light is not enough. Each art, like each individual, is unique and singular: in this singularity dwells its most thrilling appeal. We are in danger of losing light's most moving message to the soul unless we preoccupy ourselves not alone with the identities between music and color, but with their differences as well.

Let us then consider, first of all, the characteristic differences between the two sense-categories to which music and light respectively belong—the differences, that is, between time and space. A characteristic of time is succession—in time alone there is perpetual change. A characteristic of space, on the other hand, is simultaneousness—in space alone perpetual immobility would reign. An art of light would therefore naturally be more static than is music. A musical tone prolonged, even the sighing of the wind, becomes at last scarcely tolerable; while a beautiful color, like the blue of the sky, we can enjoy all day and every day without fatigue. The changing hues of a sunset, *andante* if expressed in musical nomenclature, are *allegretto* to the eye: we would have them pass less swiftly than they do. The winking, chasing, changing lights of our illuminated sky-signs are only annoying: the eye longs for rest in some serene radiance with slow and

gradual changes, while the ear demands contrast and continual change.

Again, form is essentially of space: we speak about the "form" of a musical composition, but in a different sense, it is a thing of mind and memory, which to juggle, and one which no art purely in time affords.

Coming now to the consideration, not of differences, but of identities, there is an evident correspondence often remarked between the colors of the



not concrete and palpable, like the forms of space. To give visibility to musical vibrations may well be one of the functions of our uncreated art: at all events, it would be foolish to forego the advantage of linking up form with light, as there is opportunity to do. In form we have another golden ball with spectrum and the seven notes of the diatonic scale, while the intermediate semi-tones are accounted for by combinations of adjacent primaries and secondaries, thus yielding a chromatic scale of twelve semitones, constituting an octave—the very word *chromatic* being indicative of this correspondence be-

tween sound and light. The red end of the spectrum would naturally be the low end of the color scale, and the violet end of the spectrum the high end, by reason of the relative rapidity of vibration in each case. The lower octaves would logically find their analogue in colors of deep tone, approaching black, and the higher octaves in pure, clear colors, approaching white. Thus far all is plain sailing, but there are troubled waters ahead. The so-called primary colors, red, yellow and blue, constitute a color chord with red for its tonic, yellow for its minor third and blue for its dominant. This looks plausible and promising, for we have here an unquestioned color harmony corresponding with a sound harmony. But the old idea of calling red, yellow and blue the primaries because they produce the most intense derivatives is proving fallacious. Red, green and violet make up the triad which must be employed when colored lights are used, while the process printer finds that red-orange, yellow-green, and blue-violet yield the most satisfactory results in reproductive processes. Here is a difficulty at the very outset, but one probably not insurmountable. Assuming that a satisfactory color scale can be established, by means of which every musical note and chord can be made to yield its color correlative, there remains the matter of *values* to be dealt with. In the musical scale there is a practical equality of values. In the color scale, on the other hand, each note (taken at its greatest intensity) has a positive value of its own, and they are all different. These values have no musical correlatives: they belong to color *per se*. Yellow, for example, which is the highest in value, would come in the middle of our tentative color scale: while violet is the lowest in value, and it comes at the upper end of the scale. This is just the reverse of what we could wish in looking for a workable parallel between color and sound, for every colorist knows that the whole secret of beauty and brilliance dwells in a proper understanding and adjustment of values.

Let us therefore defer the discussion of this musical parallel, so full of pitfalls, until we have attempted to build up an art of light from such simple emotional reactions as color can be discovered to yield, but using the musical correspondence in so far as it is of assistance, making the eye the final arbiter of beauty. The musical art began in this manner, from the emotional response to certain simple tones and combinations, and the delight of the ear in their repetition and variation.

The initial difficulty is to discover, with our undeveloped sensitivity, these emotional reactions to color. Where they are discernible at all they are found to be largely whimsical and personal—one person "loves" pink, and another purple, or green. Color therapeutics is too new a thing to be relied upon for data; even though colors are susceptible of classification as sedative, recuperative and stimulating, no two classifications arrived at by independent experiments would exactly correspond.

One possible method of obtaining the desired information would be to bathe a representative assemblage of people in light of various colors and degrees of intensity, note the general effect of each, and obtain the testimony of the individuals of the group. But no laboratory for this order of research has ever been founded or endowed. A friend of the author, who had been for many years a stage manager, was careful to note the effect of different colored light on theatrical audiences. He affirmed that this study was most interesting and fruitful of result, but his findings have never been published to the world. We are thrown back, therefore, upon theory, in the absence of any safer guide.

One of the theories which may be said to have justified itself in practice is that upon which is based Delsarte's famous art of expression, for it has schooled some of the greatest actors in the world and raised others from mediocrity to distinction. The Delsarte system is founded upon the idea that man is a triplicity of physical, emotional and intellectual qualities or attributes, and that the whole body and every part thereof conforms to and expresses this triplicity. The generative and digestive region corresponds with the physical, the breast with the emotional, and the head with the intellectual: "below" represents the nadir of ignorance and dejection, "above" the zenith of spiritual wisdom and power. This seems a natural and not an arbitrary classification, having interesting confirmations and correspondences, both in the outer world of form and in the inner world of consciousness. Moreover, it conforms to that theosophical scheme derived from the ancient and august wisdom of the East, which longer and better than any other has withstood the obliterating action of slow time and is even now renascent. Let us then classify the colors of the spectrum according to this theory, and discover if we can how nearly such a classification is conformable to reason and experience.

The red end of the spectrum, being lowest in vibratory rate, would correspond to the physical nature, proverbially more sluggish than the emotional and mental. The phrase, "like a red rag to a bull," suggests a relation between the color red and the animal consciousness established by observation. The "low-brow" is the dear lover of the red necktie: the "high-brow" is he who sees violet shadows on the snow. We "see red" when we are dominated by ignoble passion: in our calmer, happier moments the world is tinged with amber

and rose. Though the color green is associated with the idea of jealousy, it is associated also with the idea of sympathy, and jealousy is in the last analysis the fear of the loss of sympathy: it belongs, at all events, to the mediant, or emotional group of colors; while blue and violet are proverbially intellectual and spiritual colors, and as such find their appropriate place in the high end of the spectrum, just as our theoretical division demands.

Here, then, is something reasonably certain, certainly reasonable, as a point of departure on our quest. Having considered one color octave from this point of view, let us add an octave above and below—the upper clearer, brighter, purer; the lower, more degraded and dun. This entire lower octave we will associate with the physical nature; the mediant one with the emotional, and the upper with the intellectual and spiritual.

After this digression, we are in a better position to resume the discussion of the musical parallel. Let us assume, for the reasons given, that this color scale of twelve steps or "semi-tones" is broadly divisible into three groups, each group subtending one-third of the arc of a circle; and that the first, or red group, consisting of purple-red, red, red-orange, and orange, is related to the physical nature; that the second, or yellow group, consisting of yellow, yellow-green, green, and green-blue, is related to the emotional nature, and the third, or blue group, consisting of blue, blue-violet, violet, and purple, is related to the intellectual and spiritual nature. The merging of purple into purple-red will then correspond to the meeting-place of the highest and the lowest, "spirit" and "matter." We conceive of this meeting-place symbolically as in the "heart." Now "sanguine" is the appropriate name associated with the color of the blood—a color between purple and purple-red. It is logical, therefore, to regard this point in our color scale as its tonic—the "middle C"—though each color, just as in music each note, is itself the tonic of a scale of its own.

Mr. Louis W. Wilson—whose ophthalmic color-scale the author after much experiment and mature deliberation has accepted and adopted—makes the same affiliation between "sanguine," or blood color, and middle C, led thereto by scientific reasons entirely unassociated with any symbolism.

The color scale being thus established and broadly divided, the next step is to find out how the scheme works out in practice. The easiest and most direct way is to translate the musical chords recognized and dealt with in the science of harmony into their corresponding color combinations.

For the benefit of such readers as have no knowledge of musical harmony it should be said that the entire science of harmony is based upon the *triad* and that there are various kinds of triads: the major, the minor, the augmented, and the diminished. The major triad consists of the first note of the diatonic scale, or tonic, the third, and the fifth. The minor triad differs from the major only in that the second member is lowered a semi-tone. The augmented triad differs from the major only in that the third member is raised a semi-tone. The diminished triad differs from the minor only in that the third member is lowered a semi-tone.

The major triad in color is formed by taking any one of the twelve color centers of the ophthalmic color scale as the first member of the triad; and, reading up the scale, the fifth step (each step representing a semi-tone) determines the second member, while the third member is found in the eighth step.

Correspondingly, the minor triad in color is formed by lowering the second member of the major triad one step; the augmented triad by raising the third member of the major triad one step, and the diminished triad by lowering the third member of the minor triad one step.

These various triads are shown graphically in Figure 1 as triangles within a circle divided into twelve equal parts, each part representing a semi-tone of the chromatic scale. It is seen at a glance that in every case each triad has one of its notes (an apex) in or immediately adjacent to a different one of the grand divisions of the color scale heretofore established and described.

This certainly satisfies the mind in that it suggests balance, harmony, variety and completeness; and in the actual portrayal of these chords in color, in any key, this judgment of the mind is confirmed in every case by the eye, provided that the colors have been thrown into *harmonic suppression*. The question of relative color values cannot be discussed in this brief essay, besides being so difficult and complicated that general rules are of little avail; yet in this matter of relative color values the secret of brilliance and distinction largely resides, as has been said.

Summarizing, in practicable form, the findings already arrived at with a view to their usefulness in developing a new art of light, it may be said:

1st. That such an art, while involving the elements of mobility and change, should be more static than music—it should partake more of the nature of musical *harmony* than of *melody*.

2nd. It should involve the element of form—preferably geometrical, since that is abstract and fundamental, not dragging the mind down to the memory of particular things, but raising it to the contemplation of the archetypes of all things.

3rd. It should make use of the musical parallel, within certain well defined limits, since there is an

undisputed analogy between sound and color, confirmed not alone by reason, but by experience. It should not rest secure in a slavish fidelity to this correspondence, however, but with the musical parallel as a point of departure it should discover and conquer its own new world of beauty.

How the Ancients Built Their Walls

THE statement is frequently made that the ancient Romans used concrete freely, and that their work has lasted perfectly down to the present day. The impression that is sought to be conveyed by all such statements is that the concrete was precisely similar to that we are using now, and consequently is an argument for the durability of some of our cheap construction. Every one who has looked into the subject with any thoroughness knows, of course, that the Romans faced their walls with stone, and merely used a core, or filling, of cement and spalls. This is far different from our concrete poured into removable forms. Mr. C. R. Peers, chief inspector of ancient monuments and historic buildings in Great Britain, delivered an interesting address on "The Care of Ancient Monuments," recently. Among other things, Mr. Peers said: "We are accustomed to hear comparisons drawn between the work of former ages and our own, not to our own advantage. This is by no means always fair. There has been good and bad building in all ages, and in the course of nature more of the bad buildings have perished than of the good, and in consequence the achievement of any period which has left an appreciable number of works is liable to be judged on too favorable a ground. Even in such Roman buildings as are left there is no uniform standard of merit.

"The Roman tradition of building with two faces and a core was continued in the Middle Ages, but often with none of the care and thoroughness which was necessary for its success. In the eleventh century, at any rate, the core in many instances was little more than earth and building rubbish packed in between wrought stone faces, these latter in small stones with shallow beds. Such walls would stand no great weight and were also particularly sensitive to any foundation movement or lateral stress, having no natural strength.

"In a small building, where stresses are neither great nor complex, a weather-proof wall face protecting a weak core will often serve well enough for the time, but the ruin or reconstruction of many of our medieval buildings has followed the adoption of such a principle. Walls were pointed in tolerable lime mortar, but built in nothing but clay, and as long as the pointing was able to keep the weather out, they were able to do the work for which they had been designed. But if, through any settlement or stress, a fracture developed, the masonry had no power of resistance, but fell away and became fit for nothing but pulling down, for lack of sound walling to which to bond a repair. It will easily be seen that it is almost impossible to strengthen such a wall so as to prolong its existence appreciably without destroying its character, considering that its character is the very source of its weakness."—*Stone.*

The Ramparts of St. Mark's

THE great Church of San Marco is now rapidly disappearing from sight behind ramparts of protection. On sunless days the church is almost pitch-dark, and it is only gradually that the eye begins to distinguish the huge piles of sandbags that smother altar, ambo, pulpit and font, the swaddled figures on the chancel screen, the muffled columns that seem dwarfed and shrunken and misshapen, and vaguely recall the proportions of some early Egyptian temple. The problem of preserving the mosaics in case of an internal explosion presents great difficulties, and is capable of merely tentative solution. So far two steps have been taken: It is proposed to spread a sheet of thick cloth all over the mosaics at a distance of about five or six inches from their surface, thus forming a cushion of air which, it is hoped, will modify the violence of an explosion and the dangerous effects of the displacement of air. Further, all the glass windows of the cupolas have been removed, and, during an attack, windows and doors are left open to diminish the shock of concussion. But, in order to prevent rain from entering the building, the place of the glass windows has been taken by screens of coarse, brownish sailcloth, stretched on iron frames with hinges which readily fall outward.

The effect on the interior is most surprising. The light coming through these screens, especially on a sunny day, is of a soft, diffused yellow, a little brighter, perhaps, than the light transmitted through the alabaster windows of such a church as S. Antimo in Tuscany. This warm, glowing light exactly hits the key of the mosaics, which catch it, reflect it, are illuminated by it, till they reveal all the richness of their Oriental splendor. The elongated, Byzantine figures of the central dome, the ultra-marine saints of the southern, every design and legend on the blazing background, speak out and are intelligible; each cupola glitters like an inverted saucer full of molten gold, flooded and shimmering with radiant

(*Continued on page 372*)

MAIN ELEVATION

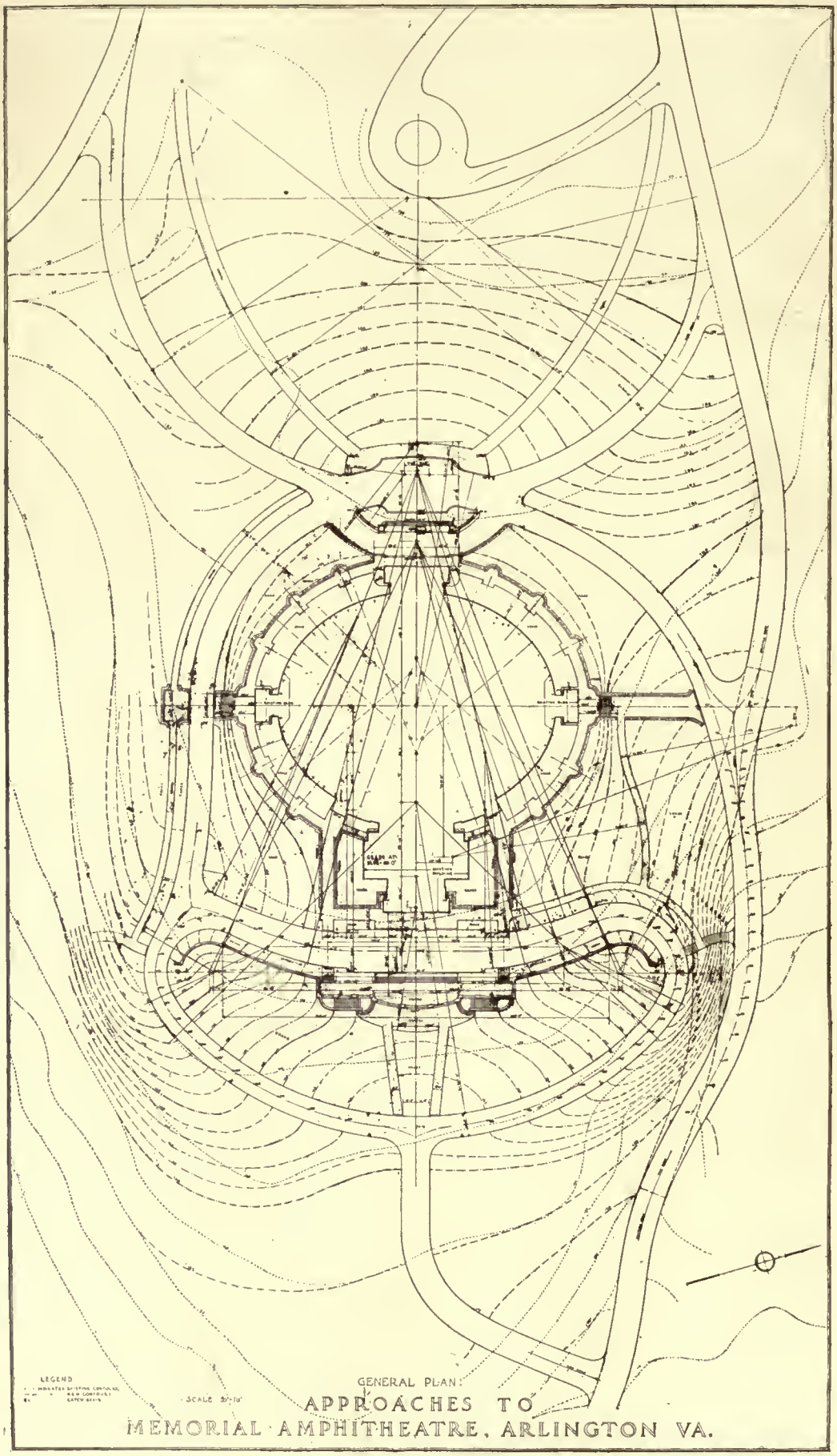
MEMORIAL AMPHITHEATER, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*

GENERAL PLAN

MEMORIAL AMPHITHEATER, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*



APPROACHES

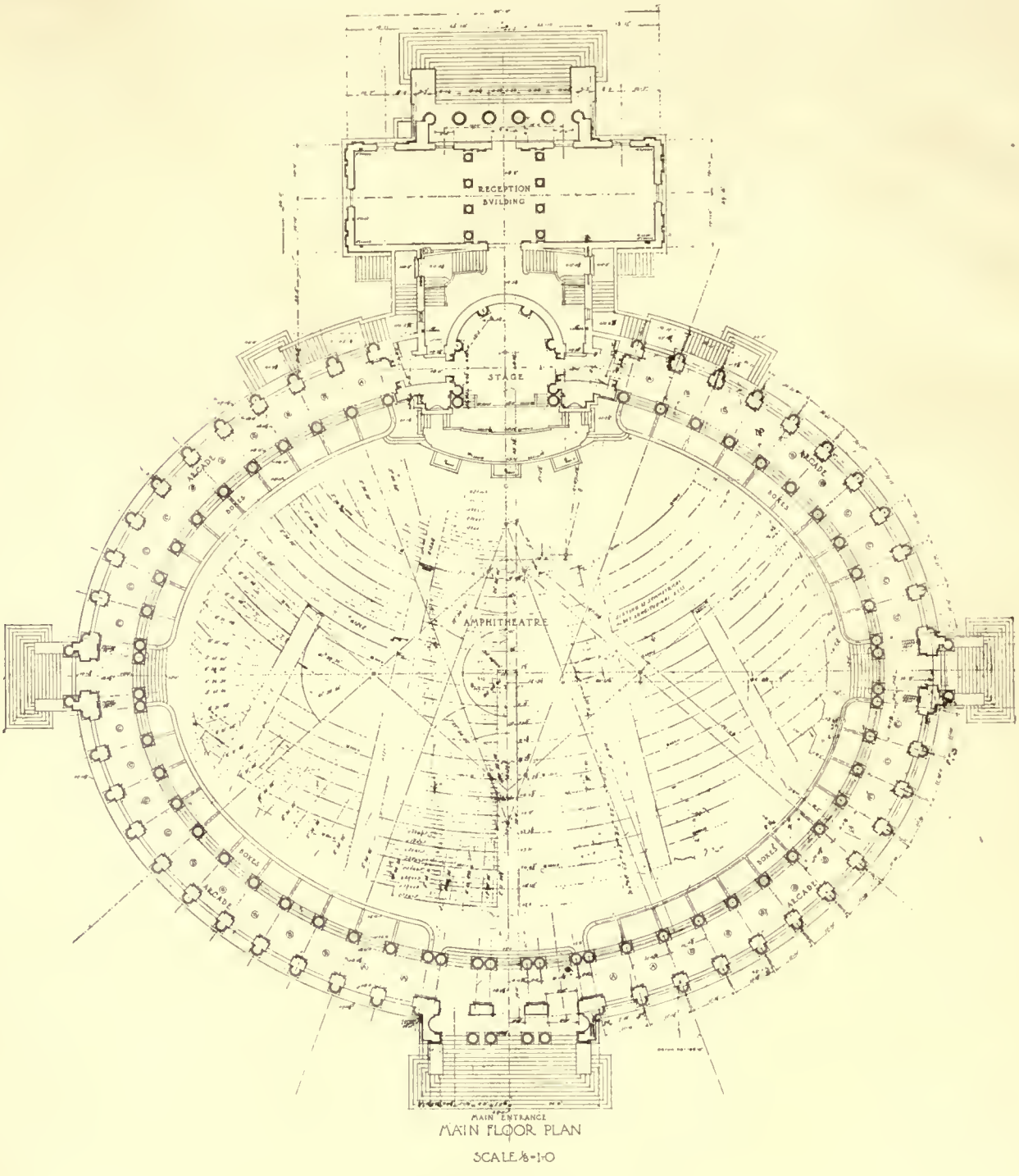
MEMORIAL AMPHITHEATER, ARLINGTON CEMETERY. ARLINGTON, VIRGINIA

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*

DETAIL OF MAIN ELEVATION

MEMORIAL AMPHITHEATER, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*



MAIN FLOOR PLAN

MEMORIAL AMPHITHEATER, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*

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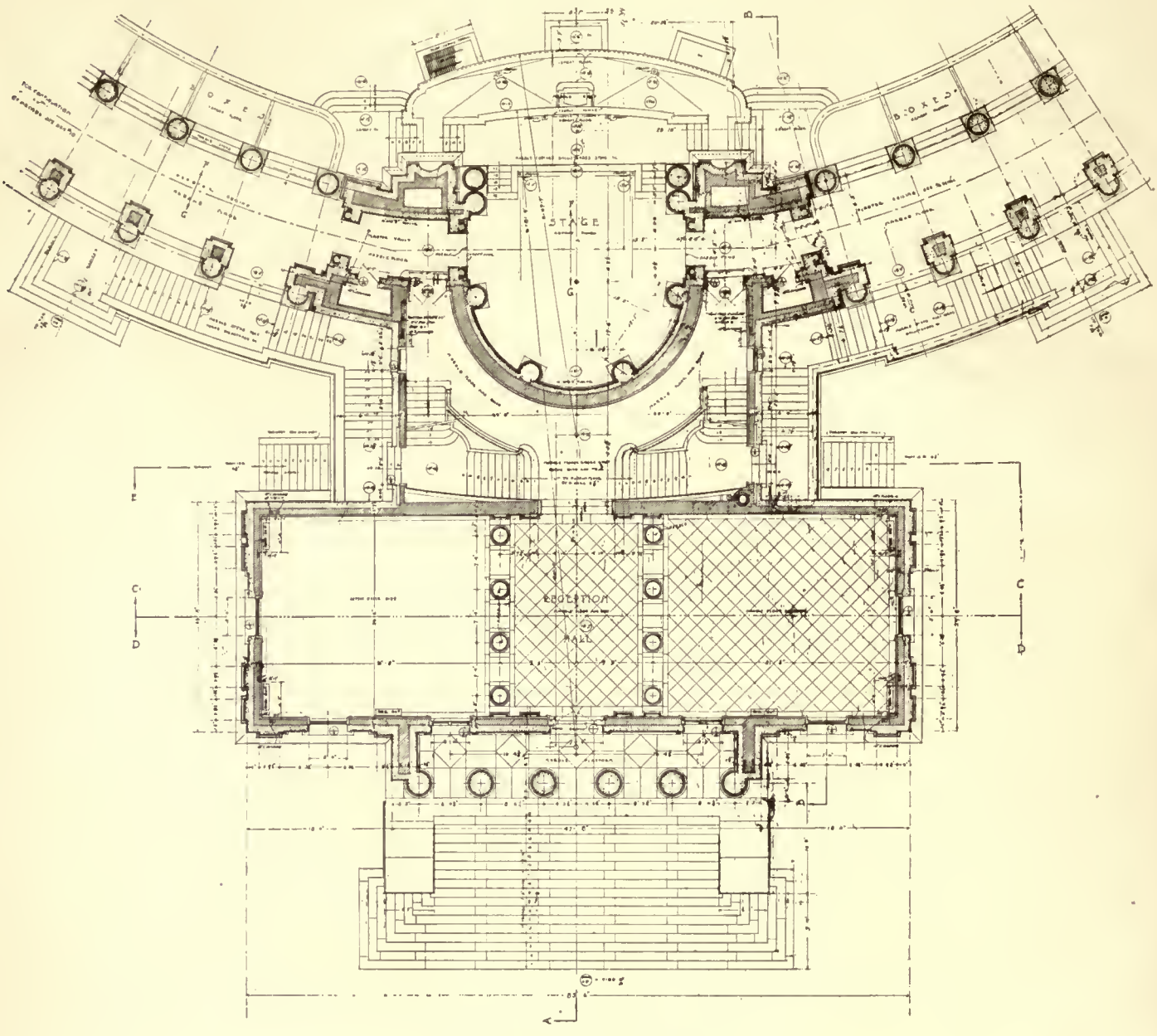

DETAIL OF FIRST FLOOR PLAN

MEMORIAL AMPHITHEATER, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*

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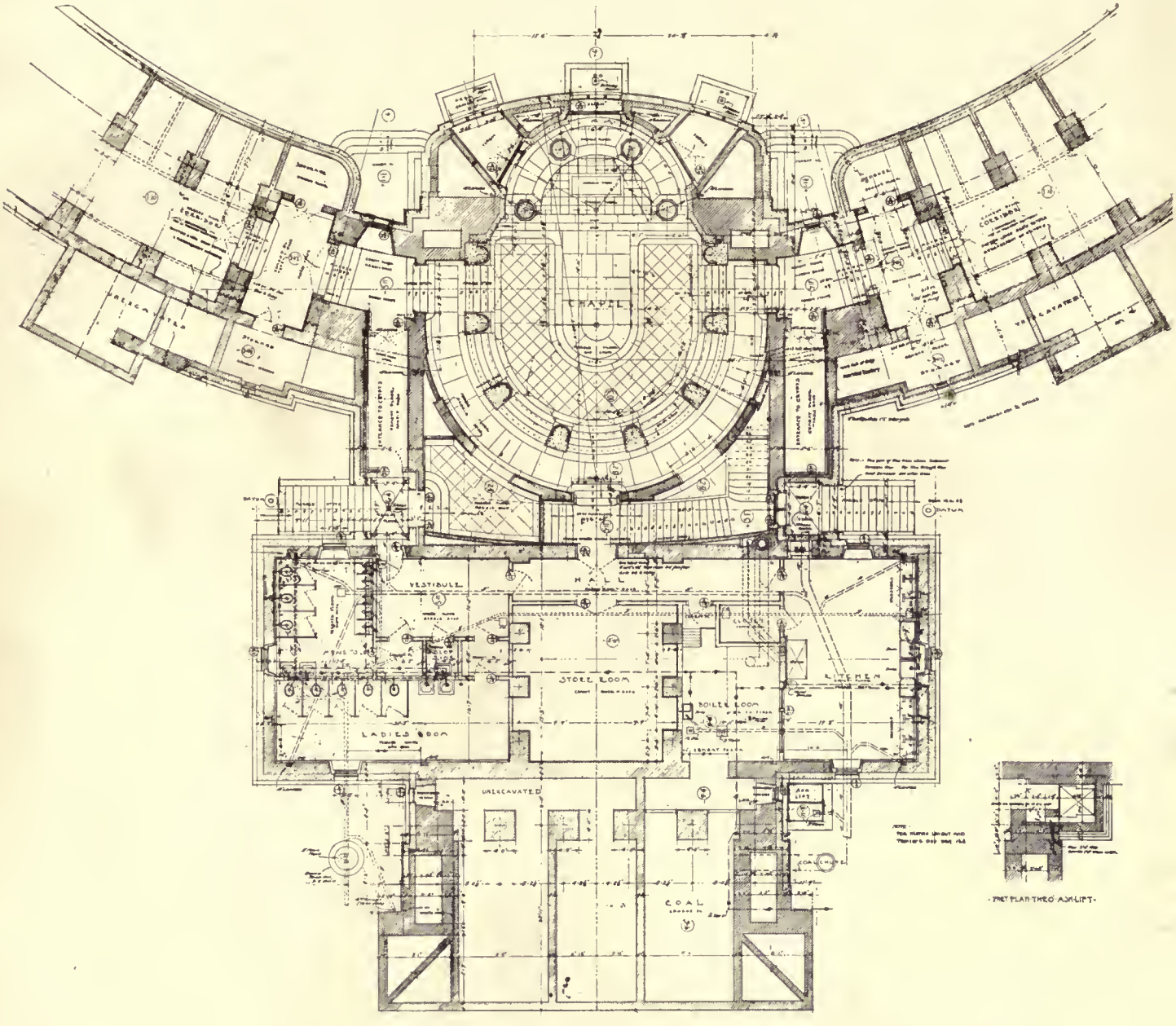
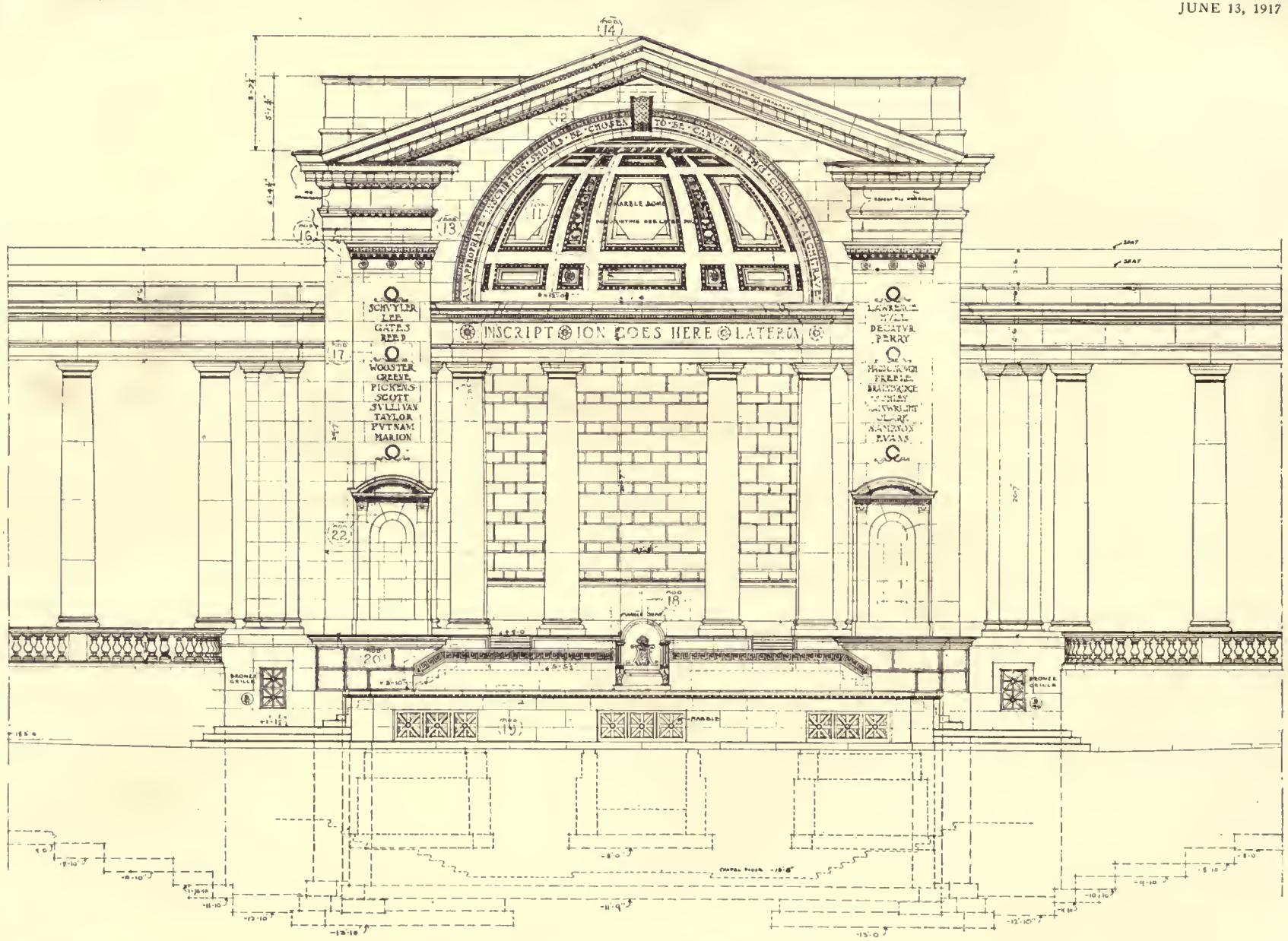


PLAN OF CHAPEL

MEMORIAL AMPHITHEATER, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA

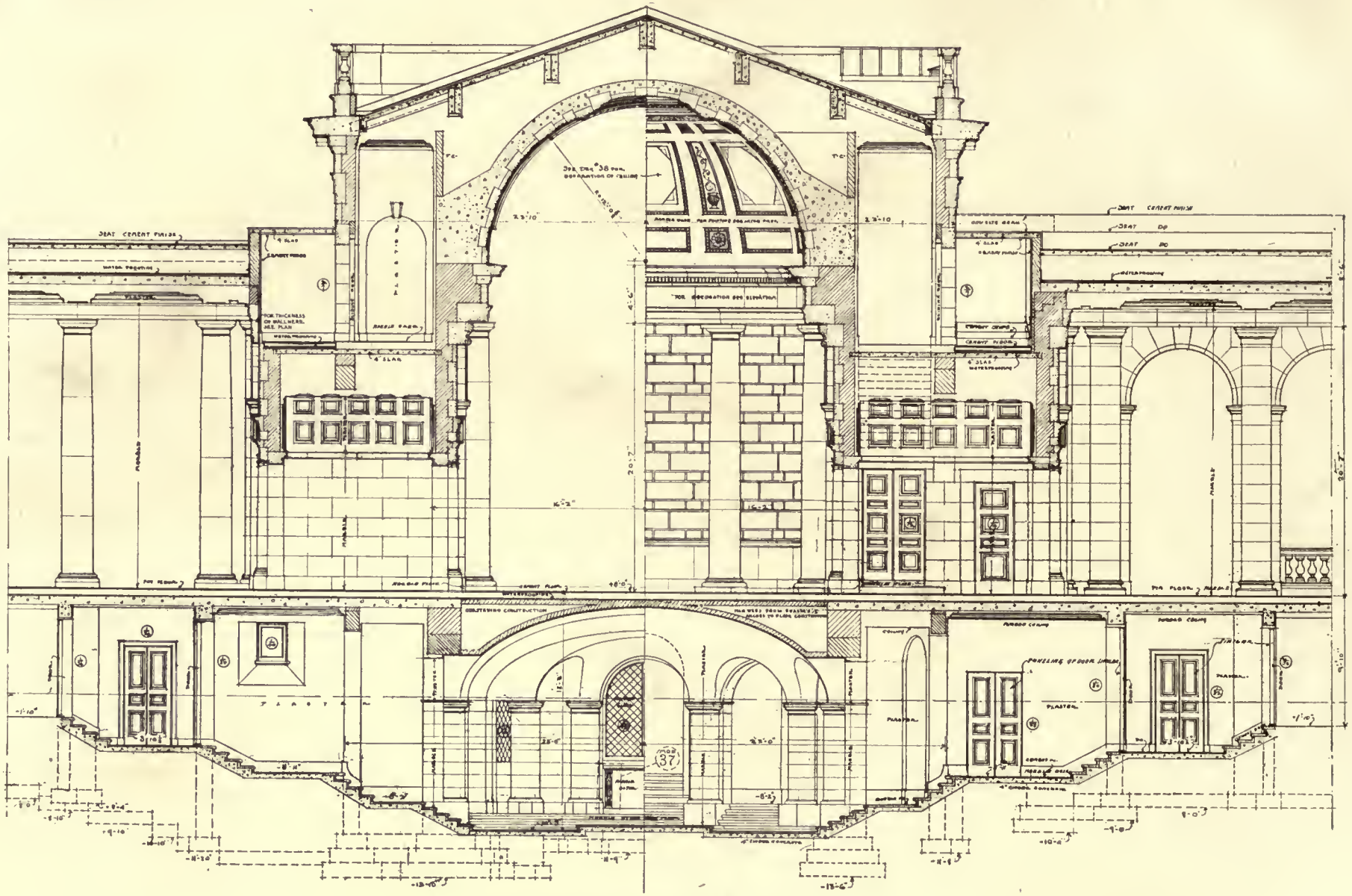
MESSRS. CARRERE & HASTINGS, *ARCHITECTS*



DETAIL OF ROSTRUM

MEMORIAL AMPHITHEATER, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA

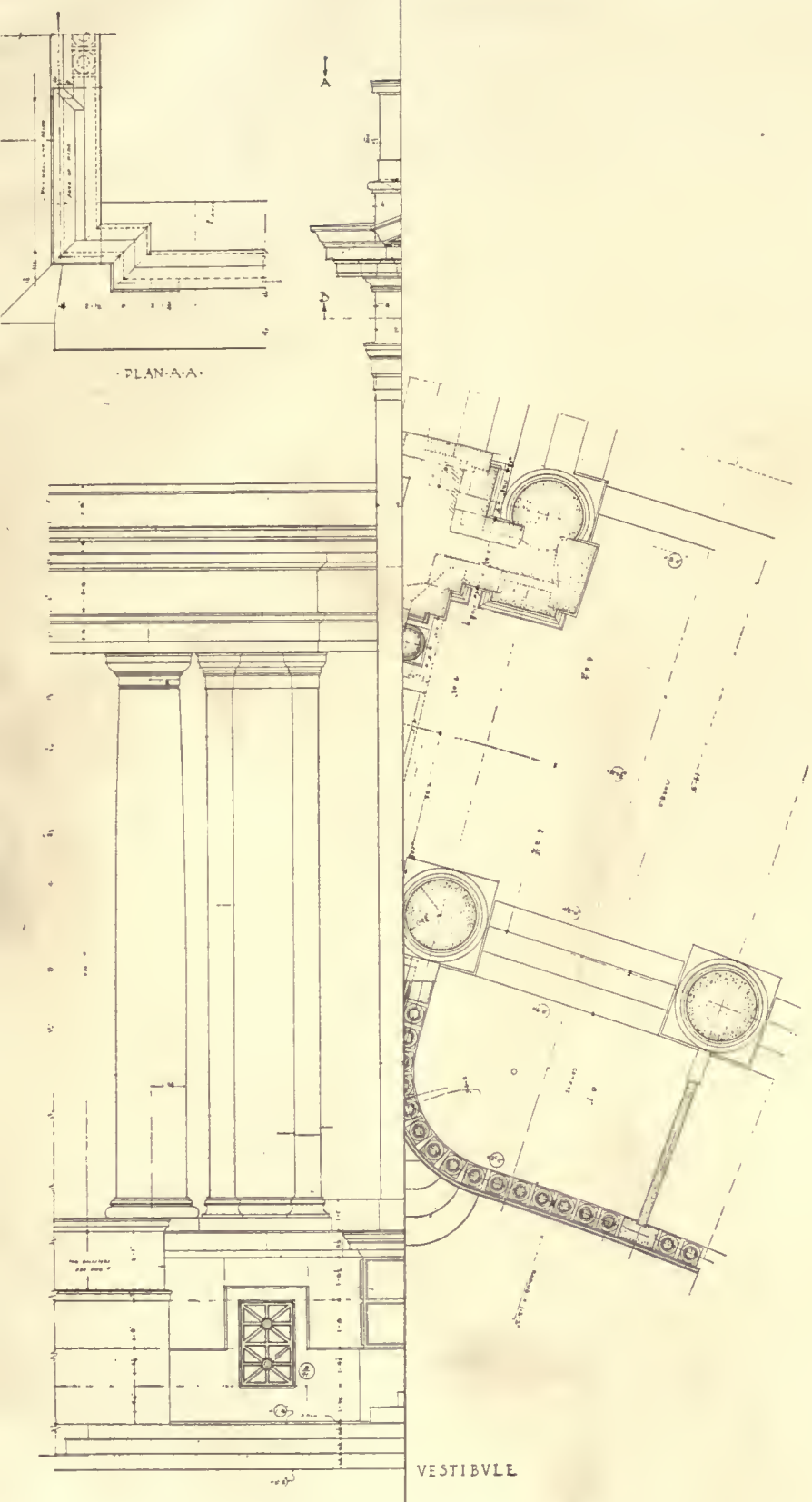
MESSRS. CARRERE & HASTINGS, *ARCHITECTS*



SECTION THROUGH ROSTRUM AND CHAPEL

MEMORIAL AMPHITHEATER, ARLINGTON CEMETERY, ARLINGTON, VIRGINIA

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*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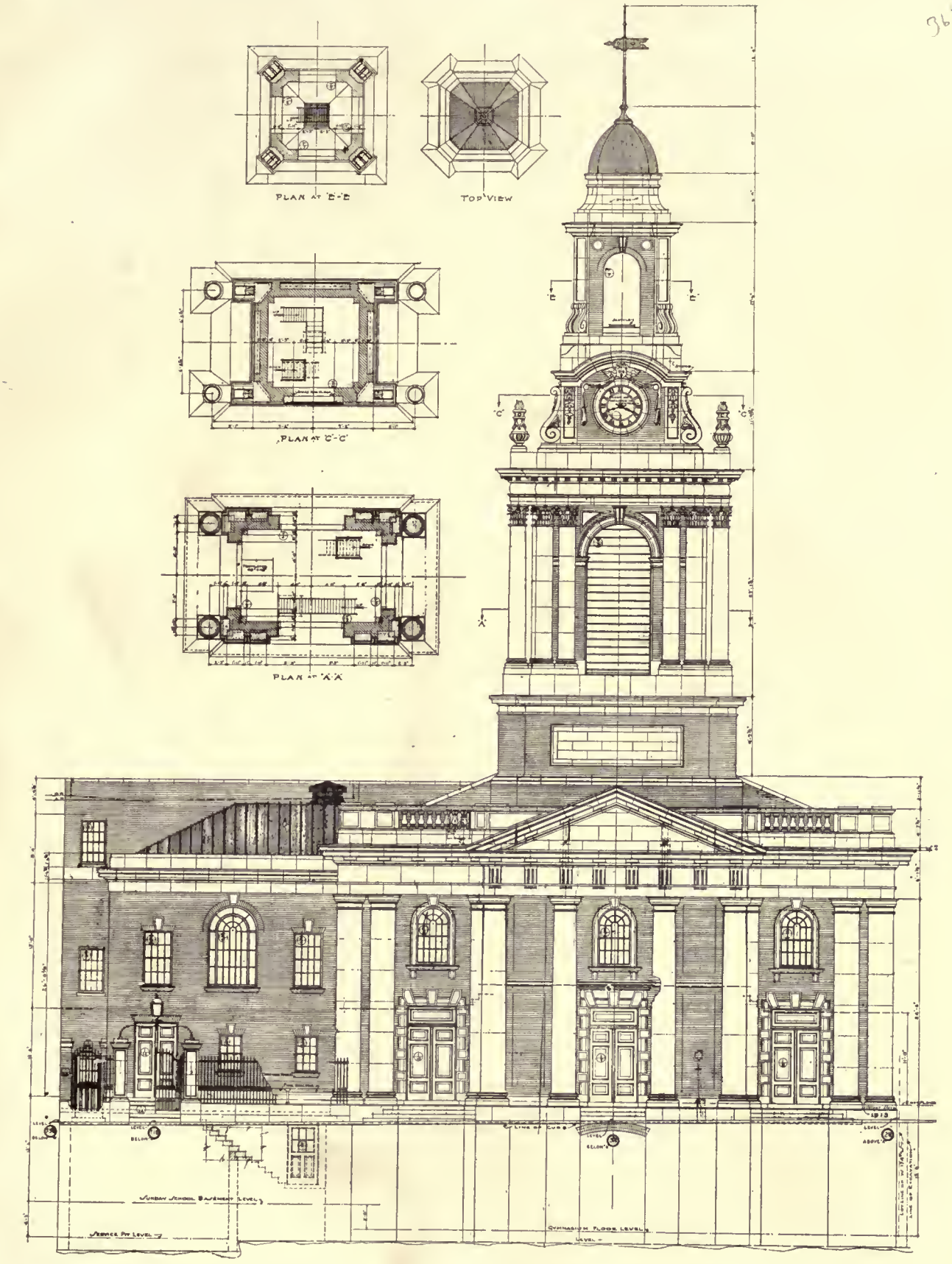
VESTIBULE

THE FORT WASHINGTON PRESBYTERIAN CHURCH, NEW YORK CITY

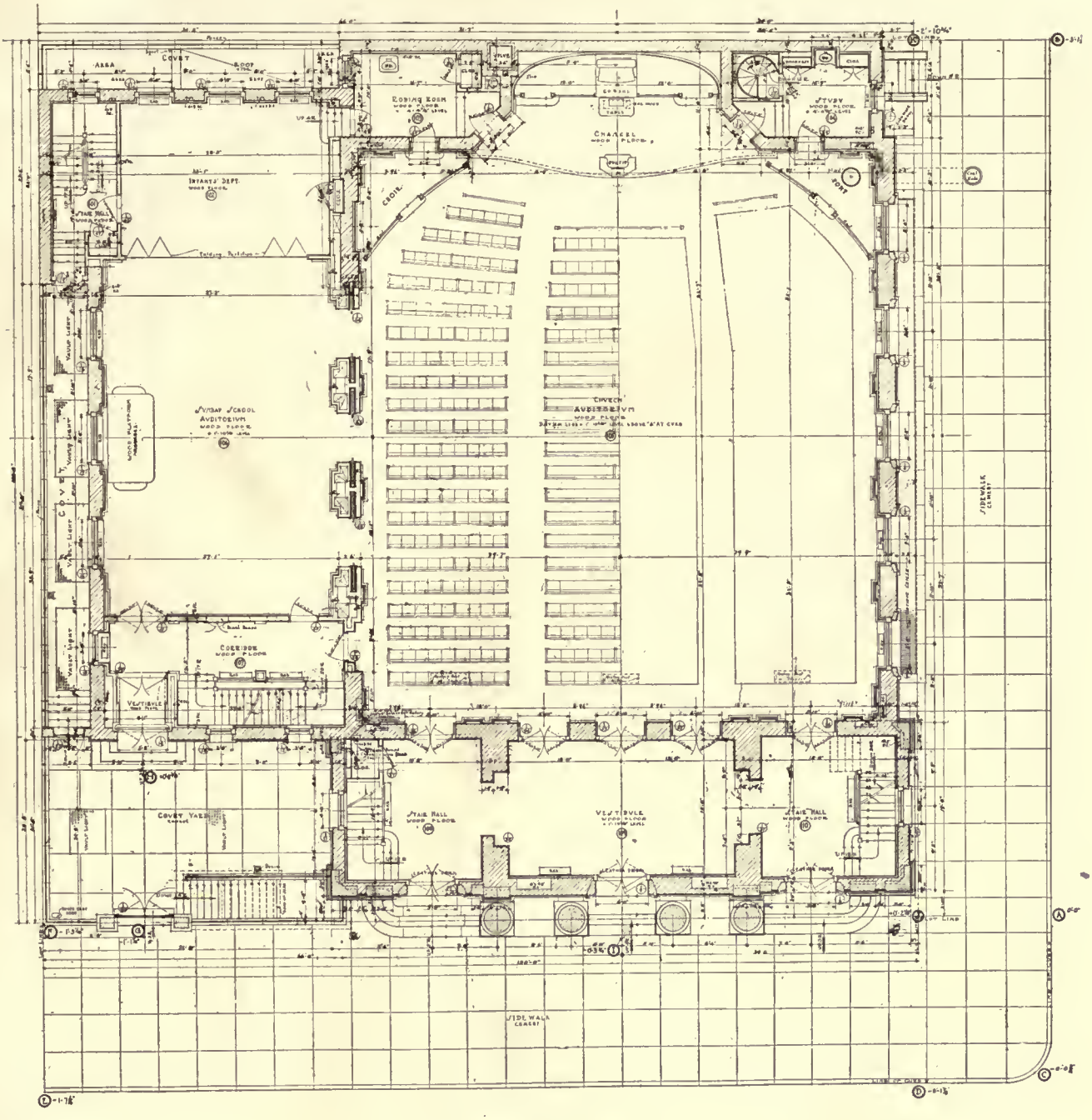
MESSRS. CARRERE & HASTINGS, *ARCHITECTS*


PLAN AT 'E-E'
TOP VIEW
PLAN AT 'C-C'
PLAN AT 'A-A'
WEST · PARK · PRESBYTERIAN · CHURCH
· OF · NEW · YORK · CITY ·
· WADSWORTH AVE. AND WEST · 174TH ST.
· FRONT · ELEVATION · ON · WEST ·
· SCALE 1/4"=1'-0" ·

FRONT ELEVATION

THE FORT WASHINGTON PRESBYTERIAN CHURCH, NEW YORK CITY

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*



MAIN FLOOR PLAN

THE FORT WASHINGTON PRESBYTERIAN CHURCH, NEW YORK CITY

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*

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Efficient Collaboration

THERE is little hope for a man's future if he himself does not believe, even though mistaken, that the work which he has last undertaken, or that which is still in process of execution, does not promise to be his best performance. This is the spirit of enthusiasm, "Oh, that we might destroy, or hide, many of the works we have completed, change some, and be remembered by the few."

The architect is the only artist who is not allowed to see his work in its completed form before giving it to the public, without having the privilege of changing it. He must conceive his work through the medium of scale drawings, a means to an end often accompanied with surprise. The architect has a right to claim a smaller number of real successes in relation to his failures than has the painter or sculptor; alas, his mistakes are more conspicuous and obtrusive.

I remember Rudyard Kipling saying that only the mediocre men in art or literature do always equally good work without failures. He said that one success in five is a good average. Of necessity the fact that one departs from the ordinary means a certain amount of experimenting before arriving at a successful result. Those who appreciate what you are trying to accomplish must understand the relation of your failures to your successes.

We need men of conviction who work in unison as of old, respecting the traditions of about two generations ago, when men were apprenticed, to hand down the art of the old generation to the artists of the new, and we must solve our problems, following these traditions to meet the changing physical conditions of modern life. If what an architect does influences others to do even better, in the right direction, he should rejoice because of his good influences. A man should be known by his following, which accomplishes far more than he himself can accomplish individually. Alas, the nineteenth century has produced many gifted men in architecture whose influence has led others astray into a labyrinth of modern confusion. I personally rejoice in the large number of men who have contributed considerably to the work in our office, and are now practising architecture all the way from the Atlantic to the Pacific; many have shown in their good works that they have outgrown the parent office. For many years the constant collaboration with young men of character and ability has been not only an endless source of pleasure and education, but by way of intimate association, encouraging suggestion and criticism, it has become a continuous schooling for us all, in effect practically establishing in the office the atmosphere of an atelier or an educational institution. The work published in this and subsequent issues of the AMERICAN ARCHITECT would be far less interesting if we had not done all we could to encourage the spirit of camaraderie.

THOMAS HASTINGS.

The Restoration of Faneuil Hall

EVERY patriotic citizen in the United States will learn with a considerable degree of satisfaction of the proposed restoration of Faneuil Hall in Boston. This satisfaction will be enhanced when it is further learned that the operations are to be under the supervision of the Boston Society of Architects. We may be sure that every architectural tradition of this historic building will be preserved.

The report of the Boston Society, presented to the Council, emphasizes the need for well directed effort, and shows in a striking manner how necessary it is to promptly safeguard this historic building. The report states in part:

"A preliminary examination of the structural fabric of Faneuil Hall indicates the great importance and pressing need of taking the final steps toward the preservation of Faneuil Hall and its restoration. This work was begun some twenty years ago and carried to a definite point at an expenditure, as we are given to understand, of more than $100,000. This work was excellent, as far as it went, but without the completion of the work the building will continue to remain unsafe from a fire standpoint, and the money expended might entirely

be lost through a conflagration starting outside the limits of this fire-proofing. For some inexplicable reason this fireproofing included only the roof, the upper two floors (the hall and the armory over) and the main staircase."

This would seem to indicate that for a considerable period this building has stood unprotected from the danger of fire.

This restoration is of architectural importance, and the safeguarding of the building from all possible danger from fire a patriotic duty. The progress of these operations will be watched by architects with considerable interest.

Speed in War Activities

THE Chamber of Commerce of the United States, firm in the belief that speed in war activities is essential, seeks to inaugurate a campaign to be conducted by the Government. A plan that has been presented to President Wilson provides for the creation of a definite branch of the Government whose functions shall be to demonstrate by nation-wide publicity the magnitude of the task taken up by this country on the declaration of war.

It is strongly urged that the fallacies that beset England should as far as possible be overcome in this country. Every man in England believed the war would be a short one and was equally sure that the task would be practically easy. The general belief also was that there was no work for the individual, but that the Government would do all that was necessary to secure an early and victorious result.

What we need in this country to overcome this feeling of false security and to awaken the whole people to a sense of individual responsibility is just such a campaign as has been outlined by the National Chamber of Commerce.

There is an obligation of personal service; this obligation is one of the first and most important duties of every man. Every condition points to the fact that we are approaching a great crisis in the war situation, and it is also more than probable that the United States will be called upon for an effort more prodigious than is generally realized. If we are to respond successfully to this demand the whole people must be aroused to a sense of individual responsibility so that there may be no doubt of the efficiency of co-operation.

The Idaho Registration Law

THE consensus of opinion appears to be to the effect that the recent registration law enacted by Idaho is one of the best of the laws passed in the various States to control the practise of architecture.

Such criticism unfavorable to this law as has been made centers about the section that permits every man who was a self-styled architect before the passage of the act to demand a license without any further demonstration of his qualifications. While there will no doubt be a few incompetent men certified to practise, they will in course of time be weeded out.

The general intent of the law has been so admirably shown that while the feature referred to is regrettable, we may rely upon it that reputable members of the profession in Idaho will see that every dignity of practise is safeguarded.

The Power Plant in Washington

RUMORS persist as to the intention of the Government to proceed along the lines as originally proposed with the erection of the power plant in Washington.

This plan has been so universally condemned by every artistic society of prominence in this country, and its undesirable features so forcibly shown, that it is difficult to believe that the authorities are willing to ignore the many and convincing arguments that have been advanced.

In this connection and with reference to other plans that will probably be formulated during the stress of war preparations, architects have a clear duty to perform.

The preservation of the capital plan is of first importance, and every scheme for the erection of any permanent structure that will mar this plan should be very vigorously protested.

Every patriotic man will be willing to set aside his personal views when it becomes a question at this time of expediency in the vast preparations that are now going forward.

The plain duty of architects is to see to it that under the guise of expediency acts are not committed that could by some other method attain equally efficient results without permanent interference with the plan so ably conceived for the development of Washington.

BRONZE DOORS, DESIGNED BY ALBERT KAHN, *ARCHITECT*, FOR THE NATIONAL BANK OF COMMERCE, DETROIT, MICH.

The Ramparts of St. Mark's

(*Continued from page 368*)

light. It is a revelation of the mosaics of San Marco; never have they been seen like this before. But we may hope that, when the war is over, and if Saint Mark's survives, the secret of lighting the cupolas, thus accidentally discovered, may be adopted permanently, and so confirm the old Italian saw that "non tutti i mali vengono per nuocere."

A Problem That Is Always with Us

BUILDING a permanent and unyielding foundation is something of an unsolved problem. The engineer's increasing skill in design ever improves the superstructure, just as the architect's planning develops ever new styles of buildings. Both engineer and architect base their planning on the premise that a rigid and stable substructure will be had, to carry their superstructure. Their assumption often is belied by the results, and the point of the matter is that this is just as often the case to-day as in the times of the medieval constructors.

"Every first-class abutment that is a few years old has some cracks," an engineer recently said in public discussion. He was making a gentle charge against foundation practice fully as much as against our limited knowledge of retaining-wall mechanics. Foundations settle, it is universally observed. But nobody has discovered, nobody has investigated, the factors determining this settlement. When and where we are to look for a settlement of ¼ in., when and where for a settlement of 2 in. or of 14 in., and how soon these settlements will develop—such questions have not yet been explored.

We know roughly that all soils are compressible and slightly elastic. We know that some soils show very marked viscous flow, and we suspect that all soils have plasticity in some degree, at least. Whether loading and the lapse of time will change a viscous soil to normal soil, we do not definitely know. When pile foundations in the river silt at New York go down 3 or 4 ft. in the course of a couple of years, we are not able to explain the phenomenon nor can we predict it, except from identical experience in the identical soil. When the piles of a bridge foundation are pushed over by flow of nearby fill, as occurred last season at Baltimore, the condition again is one in which it is hard to predict, and hard to provide a certain cure. But the larger problem, because more commonplace, is that presented by ordinary good earth, as to whose load-carrying power and liability to settlement we have practically no figures—little more than some crude notions, enough to make structures safely stable, but not enough to keep them free from cracks.

We are in a sense at the threshold of development in this field of soil and foundation studies. What beginnings have been made are not promising; or, to state the fact more fairly, they have not yet shown a path by which the field can be explored. The mere fact, however, that superstructure knowledge has far outstripped substructure knowledge makes it certain that study must turn in the direction of the latter.

It is a satisfaction to contemplate the fact that engineering skill in constructing foundations has made great advances in the last quarter-century. This in itself gives some promise that we need not despair of mastering foundation soils. But for the present earth foundations are a problem that is always with us.—*Engineering News.*

Estimating the Loss

THEY are beginning to arrive at figures which show the loss of wooden buildings in the European war. It is the merest beginning as yet, but the light it throws on the situation is unmistakable, and it affords a sort of basis for estimating how much lumber will be needed to restore what has been destroyed. That phase of the case is of interest to lumbermen in America who are looking for export business after the close of the war.

The French Minister of the Interior has completed a tally of the buildings destroyed by the Germans in that part of France which they occupied during their dash for Paris, but from which they retired after a few days or a few weeks. That district is now in French possession and the count of the loss of wooden buildings has been finished. The destruction amounted to 345,840,000 ft., about one-third of it being fine joinery work and interior finish. The invading army occupied that district a short time only. The wave of invasion rolled in and receded, but within that brief period the destruction of wooden buildings reached the enormous total given above.

The Germans still occupy a region of France nearly four times as large as that from which they have withdrawn, and the destruction there has been, from all accounts, more complete than that in the districts where their stay was short. Based on that estimate, considerably more than a billion feet of wood has been destroyed, counting buildings alone.

But France is only one corner of the devastated areas. As much or more has been destroyed in Belgium, a greater amount in Poland, while in east Prussia, Austria, and the Balkans the totals are enormous. It is doubtful if the whole exports of

lumber from the United States to Europe in many years would suffice to restore what the war has destroyed in buildings alone, comments *Hardware Record.*

The Independent Artists' Exhibition

IN the opinion of W. H. de B. Nelson, as expressed in an article in the June *International Studio,* reviewing the recent exhibition of Independent Artists, "the good ship Independent was wrecked upon the Scylla of No Jury and the Charybdis of Alphabetical Hanging."

Because some cross-grained muleteers hurled stones at Don Quixote there is, he states, no justification for casting abuse at the recent exhibition of the Independent Artists of America, especially since their intentions were undoubtedly excellent and their viewpoint in many respects worthy.

Whatever praise has been accorded this much discussed exhibition of paintings has undoubtedly been so faint as to discredit it, and the probability of a similar attempt in the future is not reassuring to those who favor "no jury" exhibitions.

This attempt to hold what was called an exhibition of modern work, unhampered by any jury restrictions, was watched with interest by architects, as there had been in some directions a pronounced sentiment to hold architectural exhibitions with the jury eliminated.

While the jury system in all exhibitions has drawbacks and features that are in some cases justly criticized, there has not up to the present time been evolved a substitute that would be generally regarded as adequate.

In his review of the late Independent exhibition, Mr. Nelson offers a substitute method, which would seem to complicate rather than to simplify present jury methods. He offers the following plan: "Why not," he writes, "instead of renouncing the jury system, have *several* juries, say three or four, each group representing a different tendency or viewpoint, and then permit every artist to select his particular jury where he might expect the best chance of acceptance?"

The further contention that this method would be "thoroughly catholic," indicates that this plan is very seriously presented. We imagine that most artists would find themselves so uncertain in their choice of a jury that their efforts would result in their abandoning an attempt to exhibit.

The contention of those who believed a "no jury" exhibition would disclose hidden talent to this country, in the same way as for a number of years have similar exhibitions in Europe, was not proven.

It is therefore quite probable that we shall adhere to the present jury system for some time, and it is equally probable that the unfortunate results of the last Independent exhibition will not encourage a similar venture, at least for some years.

The present exhibition has at least served one good purpose, as it has conclusively proven that the widely expressed contention that our Academy juries hampered hidden talent and retarded the progress of the painters' art, is not true. On the contrary, the present jury system would seem to be more firmly established, as it has evidently prevented the introduction into serious exhibitions of a lot of very mediocre work, masquerading under the false guise of "latent genius."

The Big Idea in Architecture

WHAT we especially want to get is a broader grasp of the things that lie before us, says "Ubique" in *The Architects' and Builders' Journal,* taking up the theme of Professor Lethaby's article in last month's *Review.* "The Americans have got such a grasp, and that is why they are so ready to do the 'big' thing. Of a score of illustrations that come to mind, take, as an example, that great scheme of Burnham's for the lay-out of Chicago, and the magnificent drawings of it which Guerin was commissioned to make; a scheme, be it remembered, not springing from the imperious wish of a Consul or an Emperor, but put forward by a Commercial Club, *i. e.,* a body of business men, imbued with a high civic sense. In our own metropolis how few are the 'big' things. St. Paul's, the British Museum, the Mall, the Embankment: we soon run over the list of them. Our stations are huddled in the midst of mean streets, and there are not half a dozen fine vistas to be found in the whole area. That is why it is good to see students given problems on a grand scale. The parochial mind thinks that the student will never get a Royal Palace or Bourse to design, and therefore he would be much better occupied with £30 villas or shop premises on a narrow frontage, this being the sort of work he will be most likely to carry out in actual practice. But there the small mind is hopelessly wrong, for it is this limiting of the outlook to the little things that has killed all sense of civic spirit; among the lay public it breeds the petty schemes of the Council Chamber, and among architects it breeds dull wits that can never rise to the great occasions. We need to get rid of this small outlook, and in its place to set up something better and broader, something which, when the time comes to deal with a National Memorial, will not be content with a scheme combining 'beauty with utility,' and this on a niggardly scale, but will be heart and soul for a grand monument worthy of the men who have given their lives for the nation's cause."

Recent Books

Spanish Architecture of the Sixteenth Century. By Arthur Byne and Mildred Stapley. Full cloth, 430 pp. Size, 7 x 10 inches. Price, $7.50. New York, G. P. Putnam's Sons.

LULLED to a sense of security in the often repeated assertion that so deadly had modern war weapons become that no nation would in the future enter upon war and experience all the attendant horrors, we have never realized that possibly the architectural treasures throughout the world might be destroyed and all their beauties become but a memory. The past two years have served to awaken the artistic world to the grave dangers that war presents and caused it to live in constant realization that each day's news from the fighting area may contain further mention of irreparable injury to some notable structure.

A new sense of what the future may bring, and a deeper appreciation of any effort that will put into permanent form a record of the world's good architecture so that future generations may not live in ignorance, is apparently developed.

With these and similar thoughts, one may take up this collaborative work by Mr. Byne and Mrs. Stapley with not only much artistic and literary interest, but also with a considerable degree of gratitude that a field heretofore so superficially reviewed has now received at the hands of these two competent critics the notice to which it has been for so long entitled, but never before properly accorded.

Spain has been in a sense an artistic miser. For centuries she has been accumulating a vast hoard of artistic treasure, and she has never really told to the world, through her own writers, the richness or the magnitude of her artistic wealth.

For a long time had this condition existed, and, as we are told in this book, it was not until the late eighteenth century that any systematic investigation of the country's art treasures had been undertaken.

Even then those who pursued the work did so in a somewhat haphazard manner, and, while the beauty of a structure might become the subject of praise, the name of the man who created it was seldom mentioned, sometimes through lack of a sense of the important connection between an artist and his work, but more often because the long intervening period had served to so dim the accuracy of any attribution of authorship as to make it practically guesswork.

No work on the Spanish architecture of the sixteenth century of equal importance to the one before us has been attempted. Its preparation is the result of personal and long investigation during actual residence in the country. The authors, trained by years of critical observation and analysis and thorough knowledge of the principles of architecture, have produced a work that possesses large suggestive value, and one that will become a valuable addition to the architect's reference library.

There are fourteen chapters, treating variously of provinces, an important city, and, in some instances, of a building whose historical significance or artistic value warrants more extended space in its presentation.

The illustrations are profuse, consisting of measured drawings and photographs. These form a most important part of the whole book. There are eighty plates and two hundred and twenty illustrations in the text.

A History of Ornament, Ancient and Medieval. By A. D. F. Hamlin, Professor of the History of Architecture in Columbia University. Octavo, 350 pp., price $3.00 net. New York, The Century Co.

TEXT books—and by this term we mean all the many books used in schools and colleges from the lowest to the highest grades—have in the past been more or less a compilation of earlier books. Methods long since antiquated, topics or references relegated to disuse for reasons of unimportance, have been included in later works to "pad out," in a sense, a book that shows little if any of the presentation of newer or later ideas or methods. Time-worn formulæ, hackneyed references have all been "clipped" and duly included, until a book has been produced that has little worth to the student and absolutely none at all to the teacher.

Men whose work as teachers has been crowned with success, as has Professor Hamlin's, have always realized these shortcomings in the text books that have been selected for their use, and in which selection they have had little if any influence.

While the present volume is complete in itself, it represents but the first half of the work that Professor Hamlin has undertaken.

Any reference to the literary character of the work would be superfluous. Nor is it necessary to dwell on the method of presentation of the subject.

In this instance the reviewer can merely set down his approval, leaving it to those who read the work to form an opinion as to the value of his judgment. We believe that the claim of the publishers, that "the book is absolutely alone in its field," would appear to be well founded.

The author commences the discussion of the history of ornament from primitive time through the successive periods, Egyptian, Chaldean and Asiatic, to pre-Hellenic and thus to Grecian, Roman and Byzantine examples.

In succeeding chapters Romanesque and Gothic are very thoroughly analyzed, and there is a final reference to German, Spanish and Italian methods

Legal Decisions

MECHANIC'S LIEN—NOTICE REPUTING LIABILITY STATUTES.—Verdi Lumber Company *v.* Bartlett, *et ux.* Supreme Court of Nevada.

THIS was an action by the Verdi Lumber Company, a corporation, against M. B. Bartlett and wife. From a judgment for plaintiff the defendants appealed, but judgment was affirmed.

This was an appeal from a judgment and decree of foreclosure of a mechanic's lien, entered in the District Court of and for Nye County. Appellants, who were the owners of a certain lot, and a building situated thereon, in the town of Tonopah, entered into a contract with Kelleher & Kuhlman for the making of certain alterations and additions to the said building. Pursuant to the contract, the contractors were to furnish all materials necessary in the making of the alterations and additions. The respondent, the Verdi Lumber Company, furnished and delivered to the contractors, upon their request, at the property mentioned, certain lumber and other building material, which were used by the contractors in making the alterations and additions contemplated by the contract. The contractors having failed to pay for the lumber and material so purchased, the company filed its lien statement, and in due time brought this action to foreclose the same.

Section 1 of an act entitled "An act to secure liens to mechanics and others, and to repeal all other acts in relation thereto," approved March 2, 1875, being Section 2213 of the Revised Laws of 1912, reads:

"Every person performing labor upon, or furnishing material of the value of five dollars or more, to be used in the construction, alteration or repair of any building or other * * * structure, has a lien upon the same for the work or labor done or material furnished by each, respectively whether done or furnished at the instance of the owner of the building, or other improvement, or his agent; * * * and every contractor, subcontractor, architect, builder, or other person, having charge, or control of any * * * or of the construction, alteration or repair, either in whole or in part, of any building or other improvement, as aforesaid, shall be held to be the agent of the owner, for the purposes of this chapter."

Section 9 of the same act reads as follows:

"Every building or other improvement mentioned in section 1 of this act, constructed upon any lands with the knowledge of the owner or the person having or claiming any interest therein, shall be held to have been constructed at the instance of such person or owner having or claiming any interest therein, and the interest owned or claimed shall be subject to any lien filed in accordance with the provisions of this chapter, unless such owner or person having or claiming an interest therein shall, within three days after he shall have obtained knowledge of the construction, alteration, or repair, or the intended construction, alteration, or repair, give notice that he will not be responsible for the same, by posting a notice in writing to the effect in some conspicuous place upon said land, or upon the building or other improvement situated thereon."

Several days after work had been commenced upon the property pursuant to the contract, a notice of nonliability, such as contemplated by said section 9, was posted upon the property by appellants.

Several reasons are urged why the judgment should be reversed; but, in the view which we take of the case, we deem it necessary to consider only one question, and that is, conceding that the notice of nonliability was posted in apt time, and in a conspicuous place, did it accomplish the purposes intended by it?

While appellants contend that they never became liable to respondent, because of the posting of the notice, the respondent asserts that it was not the intention of the Legislature that section 2221 should

apply to a situation such as is here presented upon the theory that under section 2213, Kelleher & Kuhlman were the agents of appellants, and that the appellants were bound by the acts of their agents just as much as they would have been had they ordered the lumber and other supplies themselves, and that if appellants had themselves ordered the materials, they could not have relieved the property from the liability by posting a notice of nonliability.

A clause similar to the last one in section 2213, supra, making "the contractor, subcontractor, architect, builder, or other person having charge of the work," the agent of the owner, is embodied in the mechanic's lien statutes of many of the states; and, so far as we have been able to find, the courts have uniformly given such language its plain and ordinary meaning, and have held that supplies and other materials ordered by persons in any of the named classes were proper to be secured by a lien with the same force and effect as if ordered by the owner himself. In fact, the intention of the Legislature in using the language making the contractor, etc., the owner's agent is so clear that the courts have not found it necessary to construe it very often.

If the language of section 2213 is given its plain meaning, and if the principal is as much bound by the acts of his agent as if he had acted for himself, how can the mere posting of a notice, such as contemplated in section 2221, supra, by the owner of the property, relieve him of liability under circumstances such as are presented in this case?

Courts seek to harmonize the different parts of laws. It would be an absurd situation if an owner of property were able to order supplies, directly or through a duly authorized agent, to procure their delivery, and then, pursuant to the preconceived plan to post a nonliability notice and escape liability therefor. It ought to require no argument to refute such a preposterous contention.

ST. JOHN: DECORATIVE DETAIL. CHURCH OF THE PAULIST FATHERS, NEW YORK.

WILLIAM LAUREL HARRIS, *PAINTER*

University of Wisconsin

The nineteenth annual summer session of the College of Engineering of the University of Wisconsin will be held at Madison during the six weeks' period beginning June 25, 1917.

Special courses will be given in chemistry, electrical, steam and hydraulic engineering, gas engines, machine design, mechanical drawing, mechanics, shop work, and surveying. All courses given in the university summer session are open to engineering students.

Special courses have been arranged for engineering, manual arts and vocational teachers.

For information address F. E. Turneaure, dean, Madison, Wisconsin.

To Facilitate Military Training for Technical Men

Wentworth Institute, Boston, has placed its entire plant at the disposal of the War Department so that technical training in military engineering for enlisted men may be facilitated. The faculty of the institute is working in co-operation with the officers of the First Regiment of Engineers. A course of construction is being given that will continue throughout the summer and probably into the fall months. The concrete laboratory at Wentworth Institute was fitted up in co-operation with the Portland Cement Association and is being used to teach engineers the essentials of concrete work as particularly applicable to military operations, such as the building of gun foundations and bomb-proof construction.

Is It Useless to Attempt to Build Fireproof Structures?

Engineering News-Record, in its issue of April 5, comments on the disastrous results of a fire in a concrete building in Canada. Ten hours after the start of the fire, the structure was in ruins, nearly half of it had collapsed and its entire contents were destroyed.

Engineering News-Record asks: "Does this mean that it is useless to attempt to build fireproof structures? Most certainly not. It means that proper conditions of exposure and contents can give rise to a conflagration that no building can resist. Efficient fire protection means much more than a fire-resistant building. It means proper water-supply for mains and sprinklers, a trained force of watchmen and fire fighters and proper isolation from near-by structures whose construction is such as to invite a fire."

Quicklime in Wrecking Operations

The expansion of quicklime when wet develops an enormous force, that acts slowly and almost irresistibly, and has long invited use for mechanical purposes. Successful efforts to make use of this force have been noted in a recent issue of *Rock Products,* that describes its efficient use in breaking up heavy brick masonry. A number of 12 ft. by 20 ft. piers, 12 ft. high, were situated between similar foundation piers for engines in operation, and it was necessary to remove them without injuring the machinery. Blasting was, therefore, inadmissible, and hand cutting and breaking too slow and expensive. The work was accomplished by drilling 3-in. vertical holes 3 ft. deep and 3 ft. apart in both directions over the entire areas of the piers, and filling them within 6 in. of the top with fresh slaked lime, in pieces ½ in. to 1½ in. wide. As soon as the lime was thoroughy wet the tops of the holes were filled with brick drilling well tamped, and in about ten minutes cracks started in every direction, and the entire tops of the foundation piers were broken into 3-ft. cubes.

An Amendment to New York's Tenement House Law

Governor Whitman of New York has signed the bill amending the tenement house law which provides that fire escapes on tenements not exceeding six stories may be placed in an outer court not less than 18 ft. wide nor extending 30 ft. in depth, or in a larger outer court whose depth does not exceed its width by more than one-half; that all liquid waste from plumbing fixtures shall be conveyed by house drains and house sewer to street sewer; that no tenement shall be erected where it is impracticable to connect with a street sewer; and making other changes.

A "Snail-Shell" Stair

The only spiral concrete staircase of its kind in the world has just been placed in the tower of the Southeast Museum in Los Angeles. Similar stairways exist elsewhere, as in the tower of St: Paul's and the tower of the Cathedral in the City of Mexico, but they were built before the age of concrete. When viewed from above, its resemblance to the shell of a snail at once gave it a name. Says Frank Reed of that city, writing in *The Engineering Record*:

"It is, for its purpose here, an improvement over Sir Christopher Wren's masterpiece—the spiral stairway ascending the interior wall in the tower

of St. Paul's Cathedral, London. The Southwest Museum helical staircase is built inside a well in the center of the tower, thus not only preserving for shelves or mounted objects the entire interior wall-space of the tower, but also supplying on its own exterior wall additional space which may be employed for museum purposes. . . The tower containing the stairway is seven stories in height, with three mezzanine balconies in the three upper stories, giving the equivalent of ten stories.

"The tower is 35 ft. square, and is supported by twelve columns and external walls 8 in. thick, reinforced with steel. It rests on a solid concrete slab or raft 3 ft. 6 in. thick. The total height is 125 ft. and the weight is 1000 tons. The construction was carried on continuously, a story being poured at a time. The staircase well is 9 ft. 2 in. in external diameter and is supported by four corner columns with 8-in. walls between them, with light and ventilation openings at each story. The stair is known as a caracole, on account of the likeness to a snail shell presented by a vertical view, as shown in one of the photographs.

"With one exception it is the only helical staircase in America having a hollow center, the other one being an ancient stone staircase in the tower of the Cathedral in the City of Mexico. The stairway contains 160 steps with 7½-in. rise each, and was built around a galvanized iron form in the shape of a pipe, while wooden forms were placed for the stairs. Material was placed at a special rock crushing and sand plant located about one mile from the building, in a dry river bed."

Lincoln Highway

Plans are going forward for the erection of the official Lincoln Highway Feeder markers through the city of Chicago.

Elmer C. Jensen, chairman of the Lincoln Highway Committee of the American Institute of Architects, has personally designed a number of suitable markers from which a final selection is to be made. It is expected that the work of placing the markers will start in the near future.

Old Abbey Glass in Metropolitan Museum

Among the many recent acquisitions at the Metropolitan Museum of Art is some old glass from the French Abbey of Flavigny founded in the tenth century. The two complete windows illustrate, one the Deluge and the other Moses and the Law. Both have architectural frameworks and the lower portions are similar, displaying heraldic devices. They are the work of Valentin Bousch, celebrated designer and maker of the windows of the Cathedral at Metz. In one window are his initials. In addition to the two full windows the museum has acquired four large and beautiful medallions from the same abbey, which are now mounted in plain glass windows, as it is supposed they were originally placed, to admit more light, and are in the same gallery.

The glass is typical of the best stained glass making of France at that period, the early and best phase of the northern renaissance.

Personals

"Mr. J. T. McLaughlin, architect, has opened an office in Lynchburg, Va., Suite 511, People's Bank Building, and desires to receive manufacturers' samples and catalogs. Mr. McLaughlin was formerly of the firm of McLaughlin & Johnson, architects."

M. H. Miller, architect, Canton, Ohio, announces that he has opened an office at 516 Daily News Building, that city, where he will practise his profession. He desires to receive manufacturers' samples and catalogs.

Arthur T. North, associate member of the American Society of Civil Engineers and formerly consulting engineer of the Yellow Pine Manufacturers' Association, has become associated with the architectural firm of Granger & Young of Chicago.

D. G. McNiel and William Orren Teets, architects, announce the formation of a partnership under the style of McNiel & Teets, for the practise of architecture. Offices are in the I. O. O. F. Building, Oil City, and the Warren Savings Bank, Warren, Pa.

The partnership existing between Messrs. G. R. Stearns and Horace W. Castor, architects and engineers, Philadelphia, Pa., has been dissolved by mutual consent. Mr. Horace W. Castor announces that he will conduct the practise of architecture at his offices in the Stephen Girard Building, Philadelphia, Pa.

Mr. Charles E. Thomas, architect, announces that following the dissolution of the firm of MacLaren & Thomas he has opened offices at 223-225 Hagerman Building, Colorado Springs, Colo., where he will continue the practise of architecture. Mr. Grant A. Wilson of the former firm will remain with Mr. Thomas.

The Flag in Decoration

To-day, when the National flag is utilized for so many decorative purposes, it is desirable to understand something about the proprieties and the fine distinctions in its use.

When displayed in connection with other flags, whether State or foreign, the National flag should always be at the right. It is properly carried on the right in parade and if flown together with State or other flags the National flag should be on the right.

Much discussion has arisen concerning the manner in which a flag should be draped at a window. The flag was not designed to drape and should always be hung in a window as if riding the breeze. In the case of the flag of the United States, with the stripes running horizontally, the stars should appear in the upper left-hand corner when viewed from without.

If, in exigency, the flag is draped, the stars should always be positioned as above stated. The stripes should never be hung vertically.

Frequently, minor flags and decorations are seen draped over the National flag. This is decidedly wrong and manifestly disrespectful. If bunting is to be used, it should be draped under and not over the flag.

When suspended in a set manner across a thoroughfare which runs east and west, the stripes should be horizontal and the stars should be to the north. Across a thoroughfare which runs north and south, the stars should be to the east.

When the flag is flown at half staff as a sign of mourning, it should be hoisted to full staff at the end of the funeral.

To fly a flag at half staff it must first be raised to full staff and then lowered.

On Memorial Day the flag should fly at half staff from sunrise to noon and full staff from noon to sunset.

There are no federal or other laws of observance concerning the use of the flag, but the patriotic societies unanimously support the theory that the flag should not be used for draping or for covering scaffolding, desks and boxes; that the red-white-and-blue bunting is proper for this purpose; and that the flag should be always "flown."

The flag should not be hoisted before sunrise, nor be allowed up after sunset. At forts and military posts, civilian spectators are expected to stand at attention and uncover during the playing of "The Star Spangled Banner," and upon the hoisting or the lowering of the flag.

The flag should never be allowed to touch the ground.

When the flag is used as a trophy decoration against a wall, if hung crossed with that of another nation, the American flag should be at the right. When the flag is hung vertically (so that it can be viewed from one side only), the blue field should be at the right as one faces it. When hung horizontally, the field should be at the left. The flag should never be used to drape the front of a reviewing stand, or speaker's platform, when it would be below persons sitting, neither should it be used as a covering for a table where things will be placed upon it.—*The Upholsterer.*

INDUSTRIAL INFORMATION

Campbell Solid Metal Window

The Harry E. Campbell Company, 8 W. 40th Street, New York City, manufacturers of the Campbell Solid Metal Windows, has issued a folder showing typical Isometric Section of this window. In connection with these sections are pointed out distinctive Campbell features of construction. Diagrams of standard box sections are also shown, and an argument in favor of solid metal window frame and sash is presented. The working joints between sash and box, sash and head, sash and sill, and at the meeting rails are locked in this type of window. It is claimed that these joints will remain weather tight indefinitely without the use of packing or weatherstrips. All wearing parts and all operating mechanism are concealed by removable cover-plates. All guides of the sliding sash can be easily adjusted. Boxes, head and sash are held together as a complete frame by through bolts. They can be knocked down for shipment and assembled on the job. The permanent joints are electrically welded.

Copy of this folder may be had upon request.

Indiana Limestone

Volume 1, No. 1, of the Indiana Limestone Library, published by the Indiana Quarrymen's Association, Bedford, Indiana, is an attractive pamphlet of 36 pages filled with a great number of reproduced illustrations of notable buildings in which Indiana limestone has been employed as the chief building material.

The cover design is an artistic reproduction in colors of a night scene of Mr. John Russell Pope's Scottish Rite Temple in Washington.

We learn that many other similar pamphlets are in course of preparation, each to cover a particular aspect of Indiana limestone. These pamphlets have been prepared particularly with a view to dis-

tribution among architects in order that they may become conversant with the wide possibilities of this stone and the many advantages that follow its use as a building material.

Indiana limestone is quarried in three colors, buff, gray and variegated. The texture is granular and varies from the very finest to a coarse stone. Its ease of working is described in the pamphlet referred to and the various other characteristics that mark it as a distinctive material are all set forth in detail.

Thatched Roofs

An illustrated pamphlet of considerable mechanical excellence has been prepared for distribution by the Creo-Dipt Company, Inc., North Tonawanda, N. Y. The title of this pamphlet is "Thatch Effect with Creo-Dipt Stain Shingles."

There are a great many well-produced illustrations of recently constructed thatch roof dwellings, and in a supplemental pamphlet entitled "Instructions for Designing and Constructing a Thatch Roof" there are reproduced roofs of buildings in various stages of construction, which illustrations graphically show the process from start to finish of laying this form of roof.

As pamphlets containing information of much interest, and a valuable addition to the reference file, these can be recommended.

Modern Walls and Ceilings

The Northwestern Expanded Metal Company, 407 South Dearborn Street, Chicago, Ill., has published a book of 32 pages on the subject of modern walls and ceilings for residence construction.

It is pointed out in the foreword that the object of the book is primarily to extend what is considered the best method of securing smooth, permanent and attractive plaster walls and ceilings for buildings of any class, and for residences in particular. The subject of plastering is taken up in some detail and causes for cracking and discoloration thoroughly considered. Illustrations of a number of residences in which the Northwestern Expanded Metal Company's products have been used are shown and detail drawings are given, illustrating the various points described.

Northwestern Expanded Metal Lath is described in detail and tables of stock size, weights and sizes are given. Copy of this book will be furnished owners, architects or contractors upon request.

Pyrobar Gypsum Floor Tile

The United States Gypsum Company, 205 West Monroe Street, Chicago, Ill., has issued a folder illustrating various installations of Pyrobar Reinforced Gypsum Floor Tile. In this connection it is stated that in long span reinforced concrete floors the use of a void or floor tile is essential for full economy. The requisites for the ideal void for concrete joist floor construction are stated as follows: Uniformity, providing accurate alignment; strength; large units; insulation of joists; ease of alteration to suit building conditions; integral ceiling plastering surface; lightest weight consistent with proper strength.

It is claimed that these requirements are fully met in the product described.

Copy of folder or any desired information on the subject may be had upon request.

Slate Paved Roofs

In a pamphlet issued by Gorman & Lees, 237 West Twenty-sixth Street, New York City, attention is directed to the necessity of utilizing every part of city property, especially that used for dwelling purposes, and to further this object they have developed a roof covering which they claim is not only a waterproofing surface but can be safely walked upon without danger of setting up leakage. They direct attention to the fact that these roofs can be laid over boards or concrete construction, and that when completed they weigh only 5½ pounds to the square foot.

These roofs are constructed of pure asphalt throughout, with a slate paved finish, and have the most positive fire-retardant qualities. They are guaranteed not to be affected by climatic changes, and the fact that this covering can be laid on old as well as new buildings makes the roof adaptable to any structure. A set of specifications accompanies the pamphlet, which may be had upon request.

PALAZZO ALBERCATI, BOLOGNA, ITALY

BALDASSARE PERUZZI, *ARCHITECT*

THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, JUNE 20, 1917 NUMBER 2165

THE CATHEDRAL, NOYON

A Memory of Noyon

BY JAMES B. CARRINGTON

SOME years ago it was my pleasure to make a journey through northern France on a bicycle, following the route that led along the rivers of Stevenson's delightful Inland Voyage. It took us from Antwerp to Pontoise, a short distance from Paris, where we ended our journey in the presence of many French soldiers who were celebrating some battle day. The past years have brought back very vividly some of the places where we stopped, LaFère, Maubeuge, Noyon, St. Quentin, all in the hands of the Germans. My impressions of none of them are more vivid than of the quiet little town of Noyon. We wheeled into the town square late in the afternoon, stopping to look over the beautifully ornate façade of the Hotel de Ville and to get our first glimpse of the cathedral, one of the oldest and most interesting of the early Gothic churches showing Roman influences. The two towers have never been finished, but the great mass of the church rises in sombre dignity as you look at it from the far side of the square. Here is Stevenson's impression of the church; he devotes an entire chapter of his book to Noyon impressions:

"I have seldom looked on the east end of a church with more complete sympathy. As it flanges out in three wide terraces and settles down broadly on the earth it looks like the poop of some great old battleship. Hollow-backed buttresses carry vases, which

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figure for the stern lanterns. There is a roll in the ground, and the towers just appear above the pitch of the roof, as though the good ship were bowing lazily over an Atlantic swell. At any moment it might be a hundred feet away from you, climbing the next billow. At any moment a window might open and some old admiral thrust forth a cocked hat and proceed to take an observation. The old admirals sail the sea no longer; the old ships of battle are all broken up and live only in pictures; but this, that was a church before ever they were thought upon, is still a church, and makes as brave an appearance by the Oise. The cathedral and the river are probably the two oldest things for miles around, and certainly they have both a grand old age.

"The sacristan took us to the top of one of the towers and showed us the five bells hanging in their loft. From above the town was a tessellated pavement of roofs and gardens; the old line of rampart was plainly traceable, and the sacristan pointed out to us, far across the plain in a bit of gleaming sky between two clouds, the towers of Chateau Coucy."

THE CATHEDRAL, NOYON

Our road brought us into Noyon, around by the back of the cathedral and the chapels, the end that Stevenson said looked like a battleship. We could hear the deep tones of the organ floating out over the quiet streets of the town, and as we turned into the open space in front of the towers a solemn funeral procession marched forth between the arches. From the quiet of our room in a little inn on a corner of the town square we looked out by moonlight that night on the solemn black-looking towers silhouetted against a cloudless sky. We thought of many things and got out our Baedeker to learn that Noyon was once the seat of a bishopric, the place where Charles the First was crowned, where Hugh Capet was made king in 987, where Calvin was born.

The church dates from the second part of the twelfth century. I do not know whether the cathedral has been battered to pieces by German shells, but I don't see how it could possibly escape the destruction that shows in other parts of the town. If it has little of the rich beauty of Rheims it has yet the appeal of great age and, to all artists, the precious heritage of Gothic beginnings.

I remember how much interest the late Russell Sturgis showed in the photographs I brought home with me, and I had promised to have copies made for him.

Early the next morning we were out to enjoy the scenes in the market place, the quaint costumes of the peasants, their great baskets of fruit, flowers and vegetables and, above all their cheerful gossip and bargaining. We wandered about the narrow side streets, everywhere finding an air of quiet peace, the somnolent dignity of centuries of civilization, and from every point as we looked up at the dark towers of the cathedral we were reminded of the intimate part it had played in the lives of the people. How many children had passed

its portals to receive their first communion, how many happy brides, how many had left it like the unknown who passed out on the afternoon of our arrival, to the chanting of a dirge! And to-day, how many times has been heard in Noyon amid the

MARKET PLACE, NOYON

(From a photograph by J. B. Carrington)

destruction and outrages of the retreating Germans, *Miserere mei Domine!*

Another of the towns on the "Voyage" route, Landrecies, was full of military, and we listened, as did Stevenson, to the beating of the drums. His impressions read like a prophecy in the light of to-day:

"In all garrison towns guard calls, and *réveilles,* and such like, make a fine, romantic interlude in civic business. Bugles and drums and fifes are of themselves most excellent things in nature, and when they carry the mind to marching armies and the picturesque vicissitudes of war they stir up something proud in the heart. But in a shadow of a town like Landrecies, with little else moving, these

CITY HALL SQUARE, NOYON

The cathedral tower in background

(From a photograph by J. B. Carrington)

points of war made a proportionate commotion. Indeed, they were the only things to remember. It was just the place to hear the round going by at night in the darkness, with the solid tramp of men marching, and the startling reverberations of the drum. It reminded you that even this place was a point in the great warfaring system of Europe, and might on some future day be ringed about with cannon smoke and thunder, and make itself a name among strong towns."

Stylistic Growth By "Borrowing"

By Richard F. Bach

RECENT advices from London announcing the death of Lisle March Phillips, an architectural critic who wielded as powerful and elegant a pen as any writer since Ruskin, recall a strong indictment which he launched recently against the prevalent and time-honored mode of using—and misusing—architectural motives of a by-gone day and age, and which has a distinct application in the cosmopolitan type of design favored in the United States. We do not hesitate to receive "suggestions" from many sources; occasionally we are "inspired" by a splendid monument whose quintessence we seek to reproduce. Such words imply an independent action of the mind, a mental digestion, as it were, before the result is presented as our own. But to make the work our own it is necessary that we assimilate the best that is in the origin of our inspiration and suggestion. And that is the point of view that the man in harness favors. He feels that he is fully justified in being "inspired" by the great men who have gone before to point the way. Nor can we honestly deny him his assurance. Progress is growth and growth means evolution. The leaf requires the twig and the twig the branch; the blossom must precede the fruit. In the same manner the growth of man's artistic expression is ordered. Excrescences appear in styles of art as in species of plant, but they are indications of immaturity, disease or dissolution, if they have not the basis of growth, however concealed from the eye.

So, then, having determined that we may within reason justifiably use Palladio or Mansart to our purposes, we are not a little shocked when Mr. Phillips expounds at length the indignities done to each other in the way of shame-faced borrowing by succeeding styles of the past. We must admit that a vein of appalling truth runs through the whole of Mr. Phillips' disquisition, even though borrowing and stealing are made to resemble each other too often and all too closely.

He differentiates carefully at the outset between "borrow" and "assimilate," and explains the architectural application as follows: "Architectural features which have been assimilated have been so much food to the assimilating style. Architectural features which have been borrowed have remained mere foreign accretions stuck on, superficially adhering; and so far from nourishing anything, they have always tended to cripple and weaken the vitality of the style they are affixed to . . . if they come in sufficient numbers they kill the style outright, and then they proceed to form a style of their own, composed altogether of borrowed features, in which the principle of life is extinct . . . Creative epochs, in which art and life are in touch with each other, assimilate but do not borrow; non-creative epochs, in which art has lost touch of life, borrow but do not assimilate."

Mr. Phillips then proceeds to the body of his subject, namely, to show how two of the most influential styles have been paraded in borrowed finery and have been applauded therefor. Greece was pilfered by Rome—flagrant borrowing, throwing creative effort to the winds; Europe at large took the transmogrified Greek manner from Rome and adapted it to its own purposes.

In the Roman engineering skill lay the germ of a splendid manner, but it was never expressed as an artistic style. The Roman work is characterized as a style for constructive reasons. Roman empirical methods did not hesitate to build with a combination of arcuated and trabeated features to the detriment of both.

It does not behoove us here to delve into the question of the extent to which ends may be thought to justify means, or, better said, result to glorify expedients. Mightier pens than ours have been staggered by that important question, and its special application to architecture but complicates the issue. Yet we will be bold enough to see some indication of development in the Roman adaptation of the Greek. We maintain that adoption is justifiable if adaptation follows. And did not the Roman so handle his "borrowed" Greek features? Here we have two of the four possible methods of construction working together; at the present moment a multitude of structures will present features illustrating all four methods. Again, shall we ask of the Roman that he sit down to scheme out a mode of expression for his construction, when the Greek offers at least a good point of departure? Your Roman presented once more the case for evolution. The Greek influence was in Etruria, in Sicily, in the heel and toe of Italy. The Roman nation grew up with Etruscan engineering and Greek design and the association of the two was as logical as an inherent development. We have found, too often the heartless critic tearing at the embalmed viscera of a style that is gone in an effort to show that it was diseased at birth. Let us study, analyze, if you will, and so profit, rather than assail the best archi-

tectural expression which a race or a nation has found for its life. For, after all, whatever the style or its faults, it must have been the national mode of expression; what else, pray, could have brought it about?

The Roman manner was essentially utilitarian, and it will be admitted that the scientific contribution in this case was quite as important as the artistic in another. We do not feel that the Roman "system of borrowing . . . tended to stifle the national creative instinct," for we are convinced that the national creative instinct of the Roman was of minor importance in architectural design, and that if he had taken time to develop such design independently of Greece we would now—other things equal—be several centuries behind our present point of progress.

The second accusation is that the Roman system was prone to be "imposing enough in scale and magnificence, but essentially formal and mechanical—a style cut off from life, not recognizing the life around it nor recognized by that life." Again we humbly take exception. We assert that the "masculine purpose and resolve" of the Roman had other purposes to serve beside that of art. The architecture was dominated by the same spirit of imperialism that made the whole coast of the Mediterranean, and much else, tributary to the city of seven hills. The architecture was the imperial stamp that followed the camp upon the site of the conquest. It was the stylistic standard or legionary eagle that proclaimed a new master. It is altogether logical that it should have developed a formality, and the formality must in the nature of things eventually appear mechanical. Mr. Phillips is not fully impressed with the magnitude of the Roman Empire at its zenith, the stupendous undertaking involved in its government, and especially in the erection of representative buildings at the four corners of the earth. "Wherever the Eagles went," he says, "they built their eyries to the same pattern," and intentionally so, for the style present on the soil was religiously left in peace, and the style of the Roman was part of his governmental machine, although we may agree that his style was tyrannical, rudely subversive of certain traditional canons of chastity and, in its absorbing advance, considerable of a juggernaut.

Mr. Phillips continues with a detailed study of the second historical period of borrowing, that of the Renaissance, but confines himself chiefly to its English version. He finds that the change from medieval spiritual fervor and "passionate verticality" to the comfort and convenience of the Renaissance was accomplished through a transition period in which appear two important constructive changes. "The tall pointed arch was bent over at the shoulder to form the horizontal Tudor arch, while the steep vaults were flattened and thin ribs spread out in concentric circles to form the vaulting which we know as fan tracery." By these simple methods the northern Gothic on horizontal, i.e., Renaissance, lines was evolved. Out of them grew a "consistency and coherence of construction" which for a time defied the inroads of the Italian solution of the demand for a stylistic record of the great awakening or *risorgimento,* as Russell Sturgis demands that it be called. Finally the invader won and the only true expression of the Renaissance in a style of indigenous growth was overwhelmed. The vitality that characterizes the creed of the Gothicist is little short of amazing. He believes in the persistence of the Gothic manner as the decadent Roman believed in his myth of the inalienable glory and splendid unity of ancient Rome long after Byzantium had been romanized by the Constantine.

Then follows the modern application and the moral: "Forms which embody their function have an eternal sanction. Forms which outrage function, or which pretend to be fulfilling a function which they are not fulfilling have the lie in their soul." Why must a form remain of a certain character because it was once so established by the Greeks? To be sure, there is the question of inherent significance, but, after all, much of the value of the "function" depends upon the particular interpretation of this or that style. There is much to be said on both sides. Perhaps at a later date we shall further discuss the variable definition of function and its yet more varied interpretation.

THE DANCE

FLORA

FOUNTAINS FOR INDOORS AND OUT—BY MARIO KORBEL, *SCULPTOR*

(Reproduced by courtesy of The New Country Life)

VOL. CXI, NO. 2165 JUNE 20, 1917

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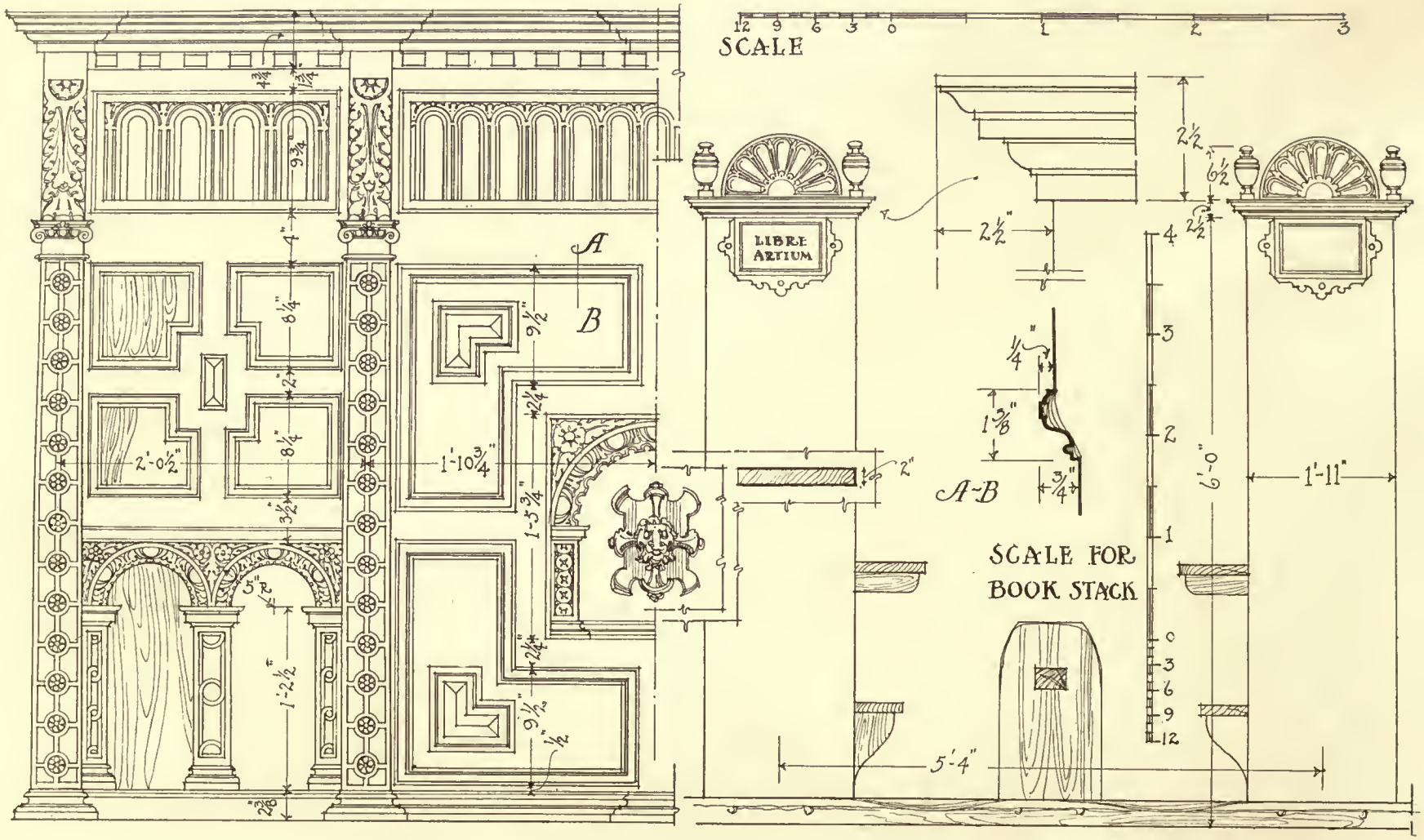

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ENGLISH DETAILS
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HOUSE OF M. J. COMERFORD, ESQ., RIDLEY PARK, PA.

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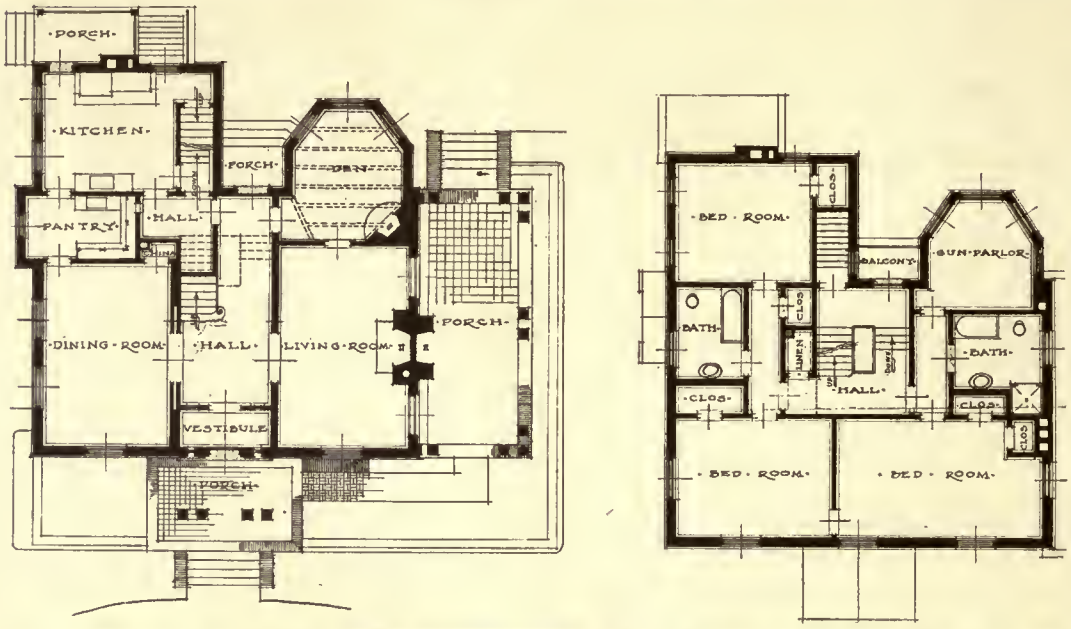
SIDE VIEW



THE HALL

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DETAIL OF PORCH

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3866

DETAIL IN DINING ROOM

DEN FIREPLACE

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DINING ROOM

LIVING ROOM MANTEL

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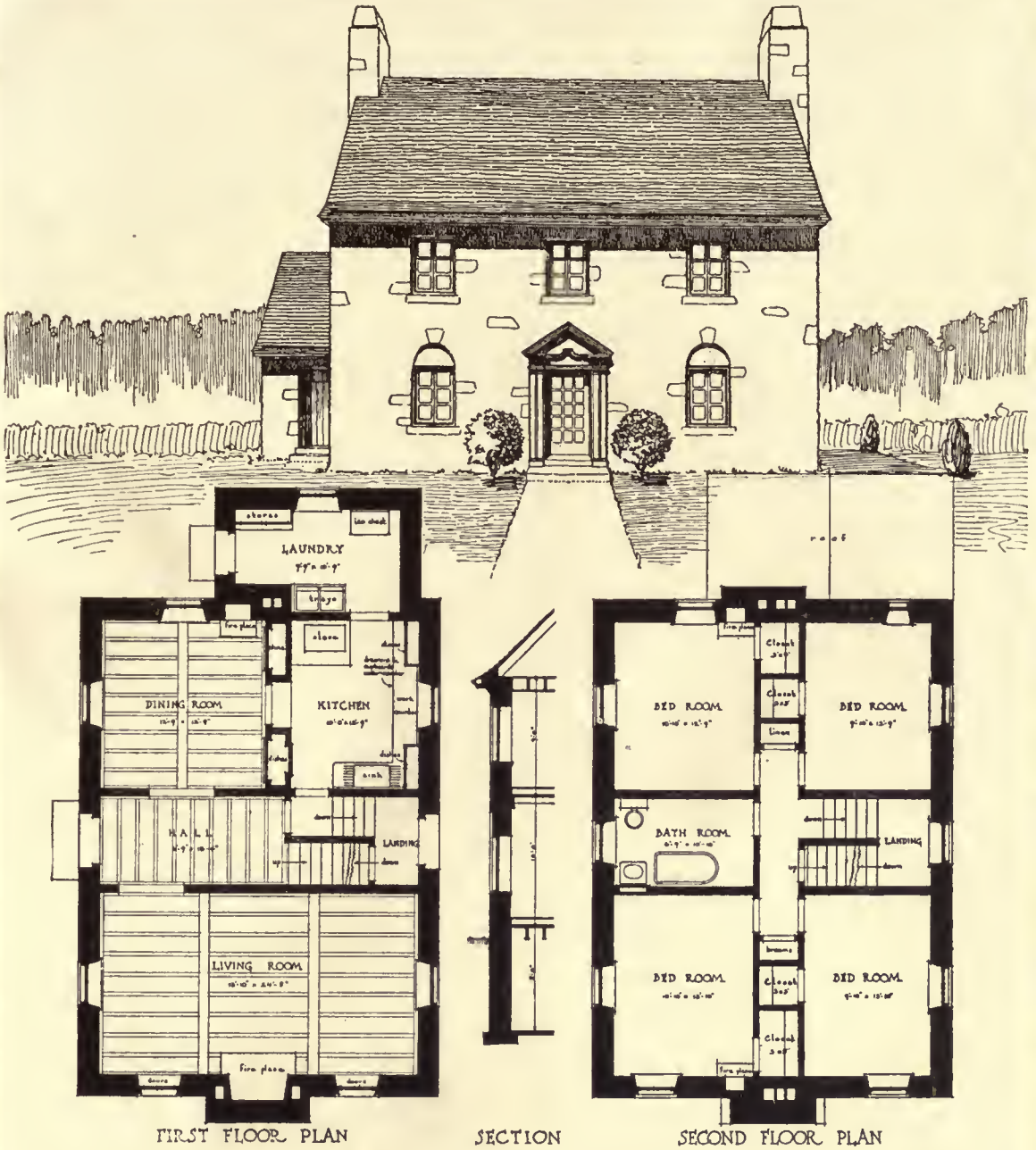

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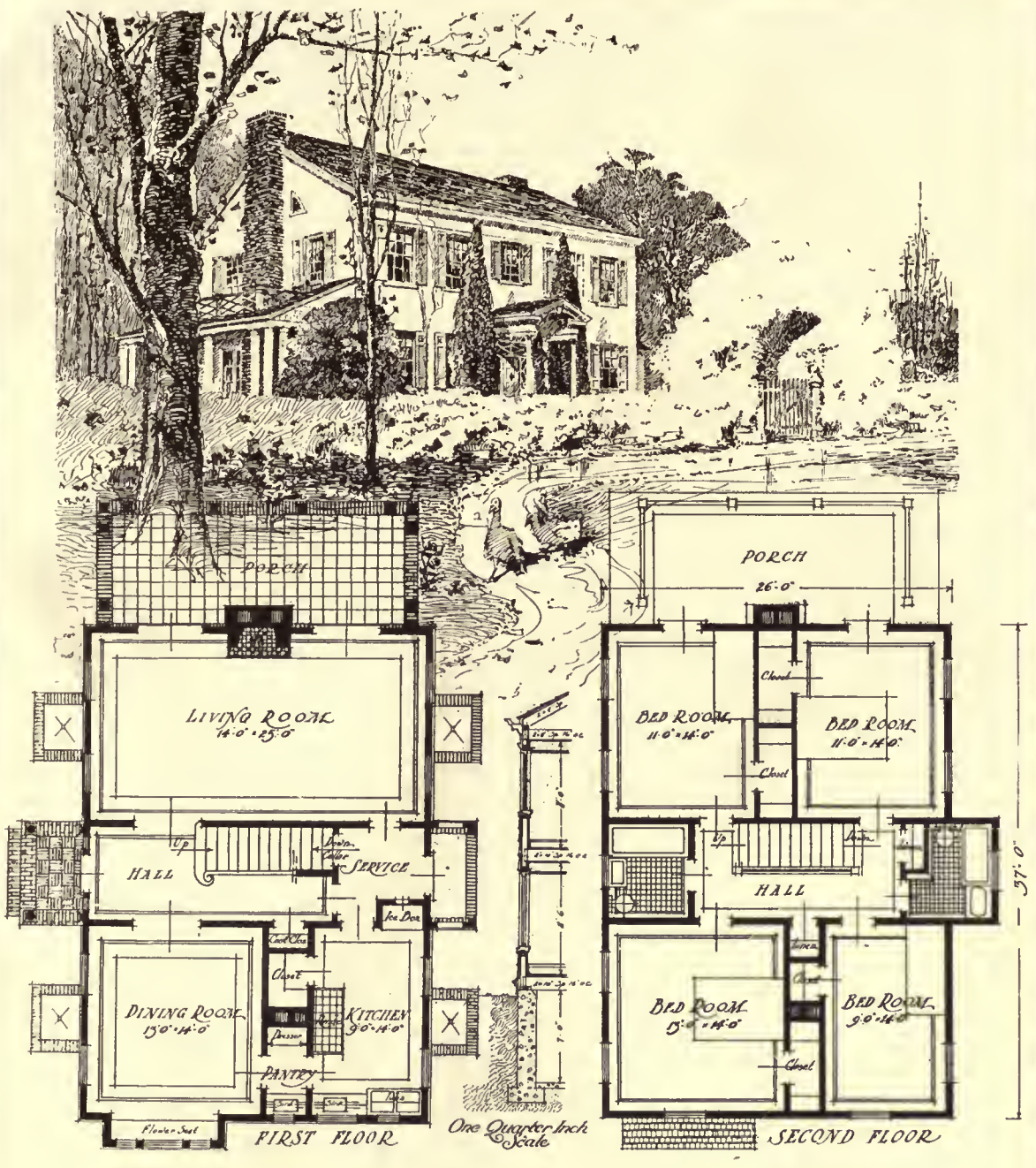

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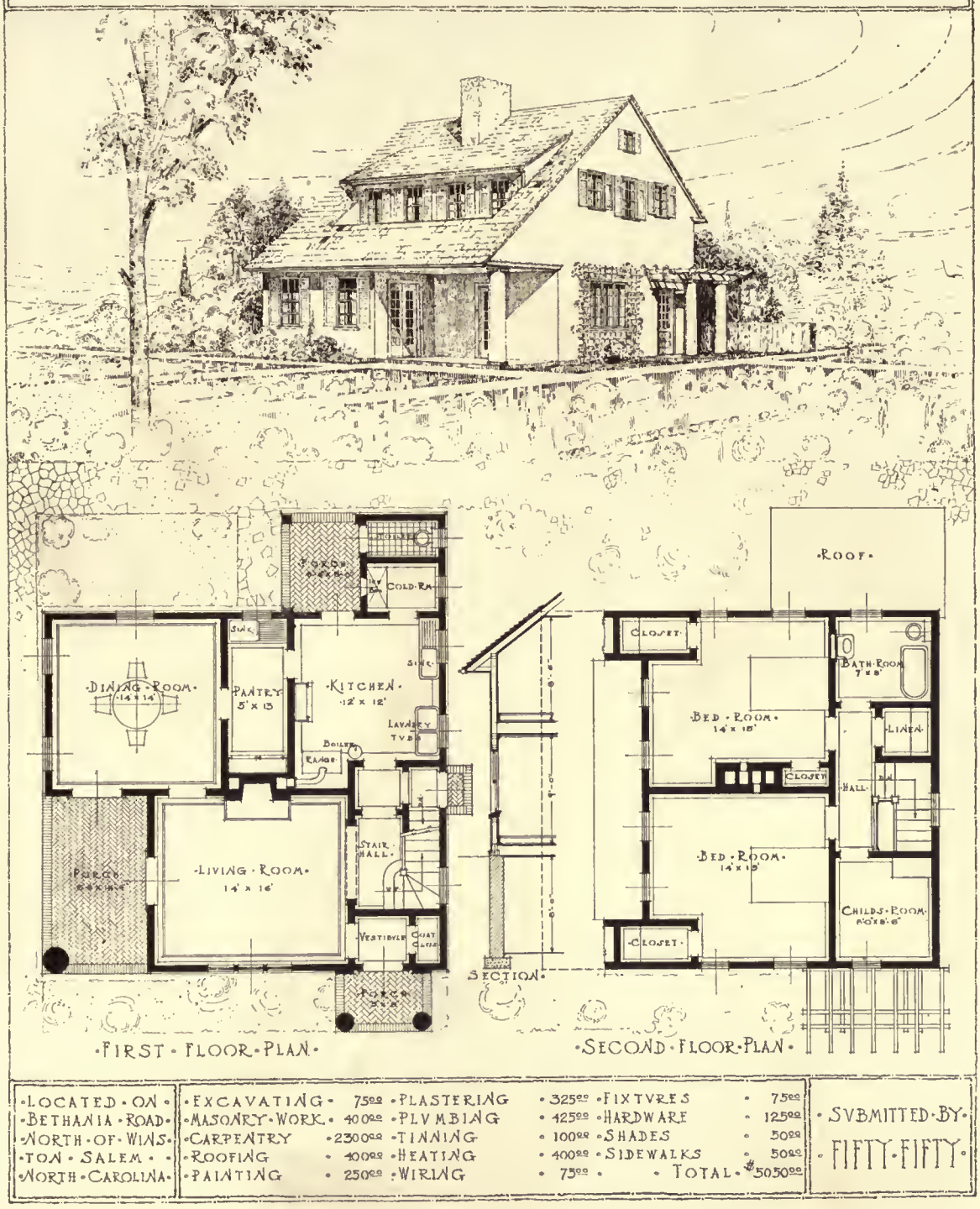

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□ □

MR. GUY STUDY, *ARCHITECT*

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VOL. CXI JUNE 20, 1917 No. 2165

E Pluribus Unum

HOWEVER distasteful and even precarious, these three years back, certain bellicose gentlemen have made the seeking of inspiration in Europe, we must give the devil his due and admit that because of them the discovery of America by Americans and for Americans was made possible. So great an event cannot hereafter escape being cited in our school histories. The year 1492 is hardly of more absorbing interest.

Crowded summer and winter resorts and enormous sales of inexpensive automobiles attest to the discovery. Old, almost ill-mannered village signs, reminding the tourist of the six or eight-mile speed limit, are being rapidly replaced by bill-boards bearing on one side, in letters 6 ft. high, the word "Welcome" and on the reverse an invitation to return, no less urgent. Breakfasts served by country hostelries are becoming almost palatable, and it is safe to prophesy that straw and excelsior mattresses will soon be counted ante-bellum curiosities. The tens of thousands who before that memorable day in August flocked across the Atlantic to enrich Europeans and in turn to be entertained by them and theirs are finding America more and more agreeable to browse about in. Physical comforts in albergos we know of have had to be reduced (or elevated) to jokes to become tolerable; and many a day in merry England was made passable by a pot of jam and final resignment to the royal weather department. And, whatever Arnold Bennett may think of our wagon-lits, we continue to be indifferent to insanitary berths and an occasional dumping into ditches.

The intensive development of knowledge concerning ourselves having been given a strong impetus and the obstacles thereto gradually disappearing, we are finding, perhaps with some surprise, that the charm of England's Midlands is rivaled in a dozen States, that the valleys and gentle hills of France are every now and then called to mind by our own, and that the majesty of the Alps is quite equaled by our rugged Rockies. We may miss the chain of cathedrals and the miles and miles of old masters. We can show no spot where Christian martyrs were burned at the stake and we are not over-burdened, thank Heaven, with many battlefields. But we have historic places sufficient, if that is what we are after; and as for the wonders of nature, it is not necessary for us to risk mal-de-mer to see more than all Europe can offer.

But touring from village to village in any part of the Union is not particularly satisfying. One does not experience that thrill of anticipation which makes traveling in Europe so delightful. It is admitted that generations of clever architects, with the help of the tooth of time, have given the old countries a certain advantage over us. But so very few Americans really care the least bit about architecture per se that they are attracted neither by our few conspicuous examples of successful buildings nor by remarkable bits of European architecture when they are not double-starred by Baedeker.

No, it cannot be in such detail as individual buildings or works of art that one part of the world is fascinating and another part uninteresting. It must be that intangible something which is unsatisfactorily termed "atmosphere." Europe, said a friend of mine, seems to have written all over it, where the modern hand of industry has not left its black finger marks, "As it was in the beginning, is now and ever shall be, world without end." It was the bigness of simplicity, the sense of stability and of perfect harmony between people and buildings and land that so impressed him abroad and the lack of which in this country he so deplored. He probably did not remember, except in a general way, one single building, but he did carry with him the oneness, the unity of effect, the panoramic quality which is so characteristic of the finer European towns.

However diversified the buildings, harmony is there seldom violated and it is apparently only in varieties of combinations of rather similar parts that differences of character and charm are obtained. On closer examination we appreciate how the individual is merged in the whole, how every building

does "its bit" toward the effect of the entire town or at least its neighborhood, and how through the accidents of topography, the turn of streets or the placing of dominant notes the character of one city is made to differ from that of another. Taken individually, the homes of the so-called "common people" of Italy are, for instance, quite uninteresting in appearance and much alike. But collectively they form a mass which has at once dignity and picturesqueness. Recall, if you please, Sienna or Perugia seen from one of the neighboring hills. And perusal of numbers of the National Geographic Magazine would lead one to believe that the most simple people, barbarians, if you will, seem easily capable of giving to their cities and villages a bigness of scale which we never begin to approach. In these harmonious places one is not distressed by a multitude of effects. There is no striving by every inhabitant to outdo the neighbor.

What was possible of accomplishment in the cities of many centuries is also possible in new cities where the ego is not given free rein. Hampstead Garden, Port Sunlight, Hellerau and the Krupp villages could hardly be more attractive; and there is no harmony of expression throughout these communities gained at the cost of individuality. There is, on the other hand, a total lack of riot. There is a decent regard for others, for the tout en semble, and the result is in each case so infinitely more beautiful than anything this country can boast of that we have every reason to question the wisdom of so completely exalting individualism, particularly in our residential architecture.

But such suppression of taste is never possible in America, we are told. We have so many different races seeking expression, and as we cannot segregate these peoples for the sake of architectural harmony, says the defense, we must accede to their right to build as they please and where they please. We have acceded, and our cities and villages are the sorriest hodge podge of architectural types to be found anywhere on this green old earth. Nowhere is there repose, nowhere charm, nowhere a unity of purpose. To the architecturally sensitive, almost every house in almost every American city seems to cry out "Stop, look and listen!" One is fairly bewildered by the array of architectural efforts until a feeling of weariness relieves one's irritated nerves, and with fierce determination he refuses longer to gaze on man's habitations—a lot of wasted effort, a jangle of sweet bells out of tune.

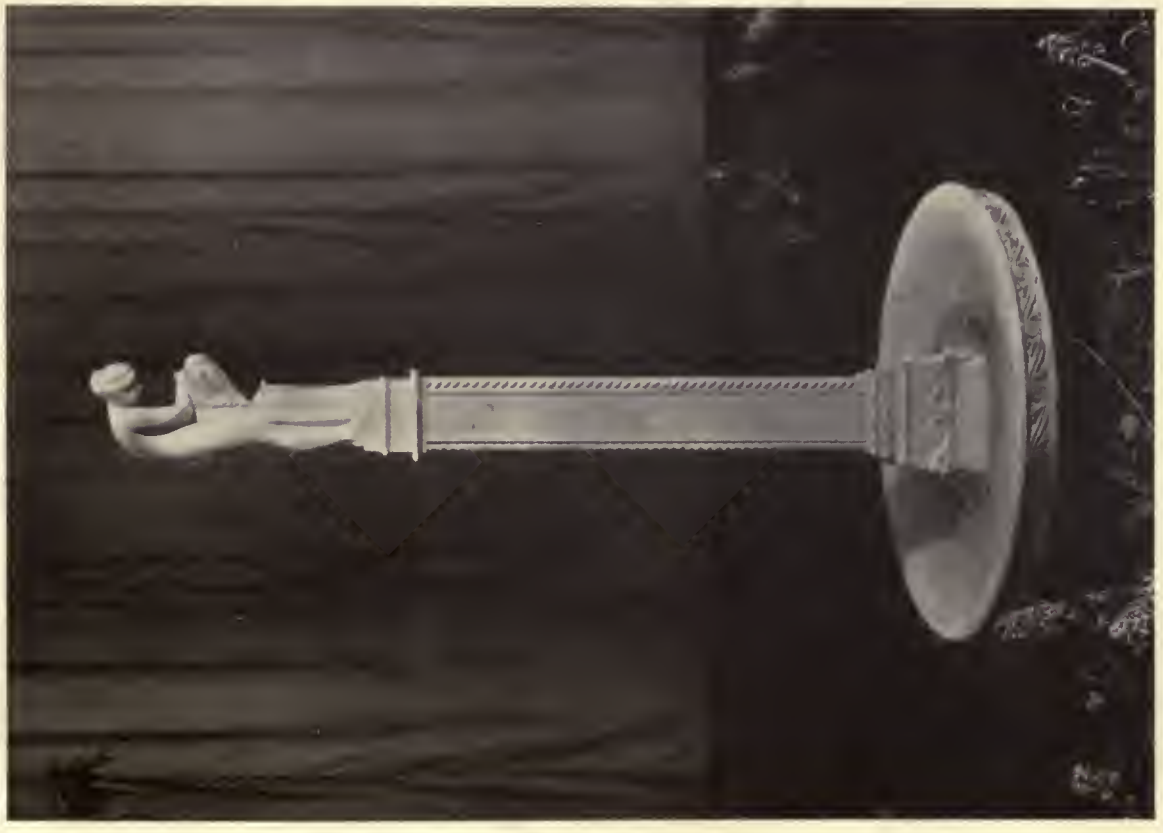
If the different races seeking expression went about the business seriously one might accept the heterogeneous mess with resignation. But when Mrs. Adolph Schmidt will be happy in nothing but a Colonial home and Mrs. Algernon Tudor sees no art except in an Italian villa and Mrs. Stanislaus Cominsky brings to her architect photographs of a Louis Quinze palace to copy, the pressing of that argument must meet with difficulty. "It is to laugh." The condition simply cannot be defended. And incidentally, we architects have our share in the blame for furnishing the occasion for this distressful growl. But far be it from a loyal American to suggest that we are suffering with a chronic condition of thoughtless pedantry or that in matters of taste we have anything to learn from less enlightened people.

Will American cities ever acquire individuality and character and cease to be mere exhibition grounds of every conceivable architectural expression, wretchedly arranged? The great war, we are told, will bring in its wake a larger co-operation, a real social democracy. If that is true, individualism as we know it is of course dead and about to be buried, and being gone, it will not again be the dominant note in our architecture. Or will perhaps the trained city planner get the upper hand and tell the architects what they may and may not do? Numerous published schemes for the housing of working men indicate that city planners mean to have architectural harmony in their sub-divisions; and it is not improbable that the homes of the toilers will point the way to the designers of the more pretentious and costly dwellings. And needless to say, considerations of harmony are not out of place in the business and manufacturing districts.

The tooth of time will be at our service, as it has been in Europe, and harmony will one day supersede the kaleidoscopic effect of modern American cities and villages. Then we can think of each as one unit of many parts—E Pluribus Unum. We will enjoy touring from Boston to San Francisco as we did three years ago from Trondhjem to Palermo. The millenium will not be far off.

WM. H. SCHUCHARDT.

YOUTH



REFLECTION

FOUNTAINS FOR INDOORS AND OUT—BY MARIO KORBEL, *SCULPTOR*

(Reproduced by courtesy of The New Country Life)

LIVING ROOM, VILLA PALMIERI, FLORENCE

Italian Furniture*

THE use of furniture may be said to be an evidence of civilization. Primitive or savage peoples had none, knew none of its uses. They made their rude couch on the ground and ate their food without rest or table on which to place it.

The development of furniture marks the progress of civilization and refinement. Those periods when the furniture or "movables," as these accessories were first called and as in many countries they are even to-day designated, are synchronal with the development of the esthetic progress of nations. It is therefore during the period of the Renaissance in Italy that furniture building was carried to its highest art. The examples that remain bear witness to a degree of artistic perception allied to a development of the art of the craftsman that has never been excelled. In fact, no other art of that much referred to period in the history of Italy has produced more valuable work. It has had a gradually increasing influence on modern production of the artist-craftsman in furniture.

So widely acknowledged was the skill of the Italian artist-craftsman that, at a time when communication with other countries was slow and often dangerous, the fame of its rare excellence quickly traveled over the then known world.

France was first to learn the lessons in furniture making that Italy was so competent to teach. The best development of French furniture was influenced by the work of the Italian craftsman. Even then far-away England learned of the great skill of the Italians; and Henry VIII sent to Italy for craftsmen to refine the austerity of the style that was characteristic of the Tudors.

In the admirable collection of photographs collected by Mr. George Leland Hunter in the portfolio of Italian Furniture and Interiors, one particular piece is almost universally present. This is the Cassone, or ornamental chest.

It is equally noticeable that in every large museum collection these Cassoni are more commonly present than any other piece. The reason for this predominance is to be found in the fact that the Cassone was the most important of all the "movables" that constituted the furnishing of the Italian houses of all the various grades. They were the "bride-chests" of the daughters of the family, in which were placed

*Italian Furniture and Interiors, 200 plates; with text by George Leland Hunter. Published in New York, by William Helburn. Ten parts, of 20 plates each, price $30. The text accompanies the last part.

the dowries of linen that the married daughters took with them to their new homes. They were never hastily constructed, but often their development was the work of many years, and on them was lavished patient skill, urged to its highest expression by strong ties of affection. Their size and shape varied. Some were low, setting squarely on the floor; others were raised high on carved and ornamented legs. Painted panels were introduced showing legends of folk-lore or scenes from the Bible, and oftentimes subjects taken from classical mythology. Among the richer and nobler families, the "arms" were carved with much ornamentation, while the inlays often introduced were of such suggestive character as represented either the present period or of other times, often ranging back to the days of early Rome. Mr. Hunter has included among his illustrations a number of the best examples of these "marriage chests," all of suggestive value to architects and designers. Examples from the Davanzati Palace in Florence, a collection now scattered, show the rare artistic skill lavished on these important pieces of furniture. They bear carving in low and high relief, beautifully designed inlays and painted panels, whose colors have been "grayed" through the mellowing influence of centuries.

SIXTEENTH CENTURY LOW-POST BED. FROM DAVANZATI PALACE, FLORENCE

During the period when the Cassone was practically the one dominating piece of furniture, necessity caused it to serve as bench or table, and it was from this beginning in Italy that these two pieces were probably evolved. The original form of bench, the forerunner of the chair, was the Florentine Cassapanca or bench. The early form of this piece of furniture was of massive proportions, and often so heavily and solidly built as to make it a fixture in the room. Its decorative treatment took its suggestion from the Cassone, which had inspired its development.

It will not be necessary to follow the various phases in the final production of the Italian chair in its many forms as used for ecclesiastical, state and domestic purposes. Each type had certain characteristics that indicated its purpose as related to the

INLAID CASSONE, NATIONAL MUSEUM, FLORENCE

FIFTEENTH CENTURY DAIS BED, VILLA PALMIERI, FLORENCE

other furniture grouped with it, and each received all the lavishment of good design and artistic taste and possessed a rarely equaled craftsmanship.

There are but few remaining good examples of Italian beds of this period. Mr. Hunter's collection of plates shows but two: one a low encased, paneled fifteenth century dais bed in the villa Palmieri in Florence, another a low-post sixteenth century bed, richly carved. We learn from paintings and engravings that there were other types of beds during this period, some with high, carved head boards, others with tall corner posts and canopies, but there are none of these extant.

The table, one of the "movables" evolved from the Cassone, took on many styles during this period in Italy, and all of them show the same artistic spirit in their design. Not all of them, however, were of wood; many were of stone and marble. The heavier stone and marble garden tables similar to those of ancient Rome, from which they undoubtedly took their inspiration in design, had thick end supports, richly carved. Tables of this period had many forms. Some were long and narrow, others round or square, hexagonal or octagonal.

"DANTE CHAIR," DAVANZATI PALACE, FLORENCE

SIXTEENTH CENTURY WRITING CABINET, VILLA PALMIERI, FLORENCE

As domestic life reached higher refinement, other forms of these marble tables were evolved, until every accessory of convenience had its particular piece of furniture.

No period has ever been more replete with good art and sound craftsmanship. Other countries set out to rival Italy in furniture design, but it is a debatable question if any have ever excelled that produced during the Italian renaissance.

SIXTEENTH CENTURY CHAIRS, VILLA PALMIERI, FLORENCE

We are indebted to the publisher, Mr. William Helburn, for permission to reproduce the accompanying illustrations.

A Recent Legal Decision

In Citizens' Bank of Waynesboro vs. Timmons, et al., decided May 5, 1917, by Court of Appeals of Georgia and reported in 91 Southeastern Reporter, page 1050, we find a suit filed by the bank to whom a contractor assigned an architect's certificate to the effect that $1,200 was due on a building contract. Among other rulings, the court made the following of interest to architects: "A contract with a building contractor stipulated that he should be paid a specified sum for the work, payable in monthly installments in such sums as the architects might in writing certify to be due. The owner reserved the right to withhold the payment of any installment when necessary to protect himself against any outstanding claims or liens for either labor or material. Held: (1) When the architects issued a certificate that a specified sum was due under the terms of the contract, the certificate was assignable and the assignee could enforce it in a court of law, as a legal assignment of a particular fund. (2) In such a suit by the assignee it was not necessary that the petition should negative the existence of liens for labor or material. This was matter of defense."

The bank acquired from the contractor, by assignment, a certificate signed by the architect to the effect that he was entitled to $1,200 as a payment under the terms of the building contract, which was broad enough to include by its language, not only perfected and unrecorded liens, but any valid "claims" for labor or material used in the construction of the building by the contractor.

The certificate was assignable, but not being a negotiable instrument, the transferee occupied no better position than the contractor, and the claim in its hands was subject to all the defenses that could have been interposed if suit had been brought by the contractor.

The undisputed evidence showed that the contractor abandoned his contract, leaving unpaid claims for material furnished and labor done that were potential liens and debts assumed (not barred by statute when assumed) for an amount which, added to sums already paid under the contract, largely exceeded the contract price. There was no averment or proof that the work had been performed in accordance with the conditions of the contract, or that full performance was in any manner waived. The bank should not recover.

FIFTEENTH CENTURY "MARRIAGE COFFER," DAVANZATI PALACE, FLORENCE

A Competition for Low-Cost Houses

WE illustrate in this issue the first three prize-winning designs in a competition recently held in New York under the direction of the National Complete Building Exposition Company. The program for this competition stated in part as follows:

"Problem is for a house *that actually has been built* at a cost of not over $5,500 complete, exclusive of lot."

This is regardless of the size of lot required for the house, kind of materials used in its construction, whether two-story or bungalow; provided same has been completed since January, 1914.

While all houses considered in the competition must have been completed within a cost of $5,500, the judges will give equal consideration to houses of lower cost. The house combining the best in design, plan and cost—the best house for the money expended—in the opinion of the judges, whether its cost is $2,000 or $5,500, will receive first award.

Only designs from which houses have been actually constructed will be considered for prizes.

A summary, of course, must be given in detail with the exact expenditures for the various items of construction.

These designs are reproduced from "Practical Homes," a book recently published by the Society Advocating Fire Elimination, Leader-News Building, Cleveland, Ohio.

Recent Books

THE CALCULATIONS FOR STEEL-FRAME STRUCTURES. By Walter Cyril Cocking. Full cloth, 312 pp., size 4½ x 7, 78 illustrations and 6 folding plates. Price $2.25. London: Scott, Greenwood & Son; distributors in U. S., D. Van Nostrand Co.

In this work it is the purpose of the author, as set forth in his preface, to provide a simple enunciation of the application of the more general theories to practical design.

He recognizes the fact that among modern structural draftsmen there are many who do not possess thorough knowledge of higher mathematics and the calculus, and to aid them to surmount the obstacles set up by this deficiency and to provide ready and accurate solution of many problems, this work has been prepared.

The author, realizing that there does exist a certain conflict between theory and practice, sounds a timely warning in the statement that there has been produced no proof that theory is in error, or is even condemned.

Many structures which can, by mathematical analysis, be proved unstable exist and continue in service, with a studied defiance of modern theory.

What would appear to be proven by this contention between the theorist and the often self-styled practical man is not that the mathematical analysis is unnecessary, but that the analysis is unfinished and the theory adopted incomplete and insufficient.

The work is divided into nineteen chapters, treating particularly of bending moments and shearing forces, deflections, stresses, loading, grillage, with several chapters on design and one devoted to approximate formulæ for use in density and checking calculations.

THE MUSEUM. A MANUAL OF THE HOUSING AND CARE OF ART COLLECTIONS. By Margaret Talbot Jackson. Full Cloth, 270 pages, size 5 x 7 inches. Price $1.75 net.

While this book has been primarily prepared to serve as a source of information to those interested in the administrative work of museums, it contains in the first two chapters, those devoted to the situation of the museum and the architectural plan, a considerable amount of practical information from the viewpoint of one who has had wide experience in museum management and care of collections. Other chapters deal with the preparation of collections, their formation, the preparation of objects for exhibition, and official questions. There are a number of illustrations of the exterior and interior of recently completed museums.

English Details

No. 3—MERTON COLLEGE LIBRARY

MERTON COLLEGE LIBRARY was built at the end of the 14th century. It is the most ancient library in England and contains many rare books and manuscripts.

The library occupies the upper story on the south and west on the Mob quad. It was built by William Rede, Bishop of Chichester, in 1377-8. The entire shell of the building, some of the glass and the cases in the west room, and the rough benches, probably belong to this time. Some of the old fittings, with their chained books, are still preserved. The present ceiling dates from 1502-3; the dormer windows from the first half of the 17th century.

Building Training Camps in War Time

Efficiency in military operations as affecting the housing of troops in the various camps throughout the country is shown in recent operations at Fort Benjamin Harrison. The necessary buildings for the housing of 500 embryo officers were erected in approximately three weeks, the work being done under the direction of the Quartermaster, Major McCaskey. Commenting on this expeditious handling of the work, Engineering News-Record states: "A few contracts have been let, for such things as electric lights and telephones, to the various utilities, but the major portion of the work that now houses completely the eighth and ninth officers' training-camp divisions was handled by day labor. Lumber was purchased in Indianapolis and rushed to the site by rail and by motor truck over a good macadam road leading to the fort. The road has been badly cut up by reason of the enormous traffic and is sadly in need of repair already. What it will be when the city to house 60,000 drafted men who will be trained here is completed, can be imagined."

The Question of Reprisals

We learn that the idea of reprisal very seriously debated in the British Parliament has been abandoned by the Government. This was disclosed when a reply was given to a question by a member, whether or not, in view of the peril of Laon Cathedral and other historic monuments, there would be appointed a committee to consider the introduction of specific punishment for future flagrant acts of vandalism on historic buildings of the world. Mr. Bonar Law replied that it was the opinion that the suggestion, if carried out, would not be likely to attain the result desired.

A Funston Memorial

A memorial to the late General Frederick Funston, who was an alumnus of Kansas University, was proposed by one of the speakers on the occasion of the recent commencement exercises.

The form of memorial to be erected is one of so much practical and common sense that it is worthy of notice.

The speaker in his remarks proposing the memorial stated:

"What a fine thing it would be for his comrades, classmates and citizens of a grateful nation to erect on Mount Oread a memorial building dedicated to the memory of our Timmy Funston—fine not only as a deserved tribute to the man who knew no fear, but fine in the sense that sentiment for the illustrious dead is made the medium whereby the University is benefited in a material way.

"And how much finer," he continued, "it would be if that building should be an armory and within its walls would be taught to each student of this institution the rudiments of military science, to the end that when autocracy challenges democracy and disputes with it the right to exist it will not be necessary for our country to establish temporary camps for the training of forty thousand officers to lead the army of liberty."

Union Station for St. Paul Minn.

After a number of years of deliberation due to the difficulties in harmonizing the various railroad interests centering in St. Paul, Minn., that city is soon to have a new twenty-two track Union Station. The plans, prepared by Charles S. Frost, architect, have been approved and filed, and contracts will soon be let. The cost of this improvement, including land, will be approximately $11,000,000. In a preliminary account of the engineering features of this proposed improvement appearing in the June 7th issue of Engineering News-Record, we learn:

"The building will be about 150 x 300 ft. The ticket office and other main facilities will be practically on the level of the Fourth Street entrance. An upper floor will contain offices, kitchen, and rest-rooms for women. Two lower or basement floors will provide for station facilities, immigrants' quarters, branch post office, etc. As the main floor, entered from Fourth Street, is about 26 ft. higher than Third Street, this permits the latter to be spanned by a bridge carrying the smoking room and a connection with the main waiting room. This room, with the concourse, forms a separate structure 80 x 400 ft., extending across the tracks, with an elevator and stairway at each platform. The general arrangement is shown by the cross-section.

"The station building will be of reinforced-concrete construction, with steel girders spanning the business lobby in which the main facilities are located. The waiting room will be a steel-frame structure, supported on columns on the platforms. Beneath the track floor a space of about 260,000 sq. ft. will be utilized for baggage and mail rooms and quarters for six express companies, with toilet-room, washroom and locker accommodations. There will also be driveways and truckways, and elevators serving each of the station platforms. Over this space the track floor will be carried by reinforced-concrete construction."

American Architects in the War

George Howe, of Mellor, Meigs & Howe, Philadelphia, Pa., Associate Member Philadelphia Chapter, A. I. A., in Europe as orderly with United States Base Hospital Number 10.

Frederick A. Muhlenberg, Reading, Pa., Associate Member Philadelphia Chapter, A. I. A., with Officers' Reserve Corps, Niagara.

Louis E. Marié, Acting City Architect, Philadelphia, Pa., Lieutenant Commander, Naval Reserve, in command of Cape May District.

Secretaries of societies and members of the profession will confer a favor upon us by sending names of members who are at this time actively employed in any branch of the military and naval service either in this country or abroad.

Building Operations in May

The congestion on all the freight-carrying railroad lines is, according to Bradstreet's, having a tendency to retard building operations in most large cities throughout the United States. This congestion or delay, and the consequent scarcity of building materials, is creating higher prices, which, with the high wages demanded by labor, cause the postponement, and in many cases the abandonment, of many proposed operations. The total expenditures permitted for in 126 cities during May were $67,500,000.00—a decrease of 36.4 per cent from the amount for the corresponding month of 1916. The total number of permits for the same period was, in 1917, 22,340—a decrease of 15.1 per cent.

The "Festa" in Macdougal Alley

The denizens of Macdougal Alley in New York, the locale of a number of artists, have been holding a "Festa" in aid of various war relief operations. This erstwhile quiet retreat, hidden in the artistic neighborhood of Washington Square, was, during the week of the Festa, the center of attraction for a large number of people who affect patronage of the arts. The decorative features and accessories were in keeping with the spirit of the occasion, a very considerable sum was realized for worthy objects, and a large amount of Liberty Bonds sold. A petition signed by many artists living in the alley is being circulated, requesting that the name of the alley be changed to Botticelli Court.

Macdougal Alley, as was the street near it, was named after a famous Revolutionary general. It has borne its name for more than half a century, and the alley, a point of interest to every native New Yorker, for an equally long time. We have few enough street names left on Manhattan Island that recall the early history of this country, and we believe it is a patriotic duty to retain them. We trust that the petition will not be granted, and that for all future time this picturesque spot will be known by the venerated name it now bears.

A Suit to Determine What Constitutes Old Building Material

An interesting case was recently tried in an English court. An action was brought by the Taunton Charity Trustees and a firm of chemists against a firm of builders and contractors respecting the ownership of a fifteenth-century carved stone mantelpiece discovered in the course of rebuilding operations at premises leased by the chemists from the trustees. The mantelpiece, when discovered, was claimed by the builders as part of the "old material," for which they were making an allowance under the contract. The plaintiffs contended that such a valuable piece of work could not possibly come under this designation. The judge said the value of the stone as "old material" would be something between $25 and $50, while its value as an ornamental carved mantel of the fifteenth century was many times greater than this. Having regard to the difference in value and to the historical and archaeological interest of the mantel, he did not think that in common parlance it would be spoken of or described as "old material." The defendants' refusal of $250 for the stone made this abundantly clear. He was of opinion that the defendants had no claim on the mantel under the contract with the chemists, and that they must return it to the plaintiffs.

Merchants Association of New York

The Merchants Association of New York offer to the large number of manufacturers who are seeking locations in New York their services in finding the best locations.

In a recent communication from the manager of the Industrial Bureau, Alfred L. Smith, it is stated:

"An astonishingly large number of manufacturers are at all times locating in the vicinity of New York. Their problem of finding the best location is an intricate and puzzling one. This is not strange in view of the fact that the industrial district of metropolitan New York contains twenty important cities and many smaller communities in addition to the five great boroughs of Greater New York. For several years we have performed a valuable service to such manufacturers in aiding them to select the

particular location best suited to their requirements and furnishing them with information concerning the many industrial factors with which they may be concerned.

"Our attention has frequently been called to the fact that most manufacturers learn of this phase of our work only after they have become established and cannot avail themselves of it. For this reason we are attempting to get in touch with such manufacturers early enough to be of aid to them in locating their plants. This is a difficult thing to do, inasmuch as we are not seeking to induce manufacturers to locate in New York, but merely offering our services to those who are coming here."

Harvard University School of Landscape Architecture

A summer course in horticulture is announced by the School of Landscape Architecture of Harvard University.

This course is designed to make the student acquainted with the summer appearance of the more common of our native trees and shrubs, as well as of some of those introduced from other countries for ornament in our parks, gardens and private estates.

It is planned to give a similar course in alternate years on herbaceous plants grown for ornament in private gardens and in parks, and on annuals used in school gardens.

Since this is the first year in which this summer course in horticulture is offered, persons intending to enroll are urged to send in their names as soon as possible, in order that arrangements may be made in advance commensurate with the number of students, to Professor J. S. Pray, chairman of the Council of the School of Landscape Architecture. 50 Garden Street, Cambridge, Mass.

Recent Enactment in New York Building Laws

An act, taking immediate effect, has been passed by the New York State Legislature, relating to floor areas and exits in factory buildings, as follows:

"Subdivision 2, Section 79-a, is amended by providing that no point in any floor area in an unsprinklered building shall be more than 100 feet distant from the entrance to an exit, and in a sprinklered building more than 150 feet; also providing that whenever any floor area exceeds 5000 square feet at least one additional means of exit must be provided for each 5000 square feet in excess of 5000 square feet, except where the Industrial Commission shall otherwise prescribe."

Rapid Development of the High Building

In less than two decades the tall building in New York has doubled in height.

The highest building in the world used for office purposes in 1899 was the Park Row Building, opposite the New York City Post Office. It is 382 feet high. The Woolworth Building, since erected, on the opposite side of Broadway, is 792 feet high.

The Cupola of New York's City Hall

Pending the decision as to just which design shall be followed in the rebuilding of the cupola of the City Hall in New York, recently destroyed by fire, a very pronounced sentiment is apparent, favoring the selection of John McComb's original design.

The Merchants' Association of New York is strongly urging the reproduction of that design, as "it will," the recommendation states, "complete the restoration of a building of the highest historical and architectural value."

The design of the original cupola was harmonious with the design of the remainder of the building, but no provision was made for setting a clock in the cupola.

The city decided in 1830 that it ought to have a clock on its City Hall. In order to make room for it the cupola was redesigned and rebuilt, its height being increased one story for the clock.

This 1830 cupola was burned in 1858 after a celebration of the laying of the first Atlantic cable, in which fireworks played a prominent part.

Efforts were made at that time to have the original cupola restored, but the demand for a clock prevented its success and the cupola recently burned was rebuilt at that time, clock and all.

Industrial Information

A Family of Door Specialists

A remarkable organization is that of W. D. Crooks & Sons of Williamsport, Pa., in which the efforts of a father and six sons are concentrated upon the manufacture and sale of hardwood veneered doors and panels. By specializing for thirty years in one line, this concern have a basis for the claim that they have obtained a high quality and efficiency for their product. A short history of the business family, together with an array of door designs and specifications, is included in a handsome and well-arranged catalog entitled "Veneered Doors," issued by the company.

The Art of Wood Finishing

The most important requisites for a beautiful interior, aside from the plan itself, are probably the colorings and finish in walls and woodwork. A service equipped to furnish not only exhaustive information but samples of plain and finished trim in a variety of woods and colorings, is maintained by The Bridgeport Wood Finishing Co., Still River, Conn. A request for a folder entitled "The Way to the Artistic Home," or a post card asking for information and samples of a specific kind of trim for a stated purpose, will set the Service Department of the company in motion in behalf of the inquirer.

Electric Purification of Water

While every architect is undoubtedly impressed with the value of the purification and sterilization of water supply, there are undoubtedly many details of systems and comparisons of installations with which he is not thoroughly familiar. A pamphlet issued by the Electric Water Sterilizer Company of Scottsdale, Pa., sets forth, both from a general and a bacteriological standpoint, the advantages of electric purification of water for household use, for hospitals and hotels, office buildings and distilleries. This information is given in a way that will afford architects quick and easy access to such details as may interest them. For this reason the pamphlet will be found useful in the specification files of the architect's office.

Boilers

Some interesting points on heating of especial value to architects may be found in Catalog No. 12 of The Burley Heater Company of Tyrone, Pa., which illustrates and describes the features of Victor Round Sectional Boilers and Burley Sectional Boilers. Formulæ for direct radiation, greenhouse heating, the area of flues and other matters of importance in heating systems are given.

Heat-Regulating Devices

An index of thermostats for every conceivable form of temperature control is given by the Robertshaw Manufacturing Co. of Youngwood, Pa., in Catalog S. These manufacturers have for years been students of automatic heat-regulating devices and they particularly desire to correspond with architects who have heating problems for solution.

Automatic Gravity Conveyors

Gravity roller conveyors, wheel conveyors and automatic elevators for numerous factory uses are described and illustrated in an interesting publication circulated by the Mathews Gravity Carrier Company, whose main office and factory are at Ellwood City, Pa. The Mathews company are originators of many of the gravity conveying devices now in use and they have met many problems in their field. Ask for booklet entitled "Standard Equipment."

Metal Windows

A folder issued by Richie, Browne & Donald, 2101 Flushing Avenue, Maspeth, N. Y., recites briefly the merits claimed for the Browne window. This window is of solid steel or bronze, of a construction such as to make it practically indestructible. Its simplicity of operation, easy accessibility for cleaning, lightness of construction, fireproof quality and architectural attractiveness are all advantages claimed in its favor.

The folder referred to may be had upon request.

HOUSE IN PADUA, ITALY

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THE AMERICAN ARCHITECT

VOL. CXI WEDNESDAY, JUNE 27, 1917 NUMBER 2166

DETAIL OF WROUGHT IRON BALCONY RAIL, HOTEL DE VILLE, NANCY

The Crafts of Iron and Bronze

THERE are many men who pride themselves on an appreciation of art. Among these are the "Amateur of Art," the man who affects the society of artists and who believes he has unerring judgment, and also that ludicrous (to artists) individual who boastfully states he "knows nothing about art but knows what he likes." With this last we shall also find the man of ample means who carefully sends his thousand-dollar fur coat to cold storage on the advent of spring and carelessly hangs a two-thousand-dollar picture on his wall, leaving it to suffer from neglect for an indefinite period. The attitude of the general public, ignorant of what constitutes good art and without knowledge of the temperamental characteristics of men who create it, has a depressing influence on the progress of art towards its legitimate goal. In no branch of artistic development has it a greater or more deterrent influence than on the art of the artisan or master craftsman.

Let us take, for example, the two arts of bronze and iron, the oldest of the artistic interpretations of metal. From prehistoric times these two metals have been used for decorative purposes. The charm of ancient, medieval and Renaissance bronze and iron has always been due to the painstaking artistic and technical care given to each separate piece. Among the ancients every example in these metals represented the artistic skill of the man who made it. The artist worked *con amore*, and put all that he had of knowledge into his result. If skillful, he lacked no rich patrons. His place as an artist was as firmly fixed as that of the artist painter and artist sculptor.

In bronze and iron, as in every other craft, there have been periods marked by the rise and fall of artistic performance. Periods of decadence have been followed by the most successful revivals of these crafts. Many reasons have been assigned for these conditions, the most probable being that these master artists, like poets, were "born, not made." and their development was greater in some periods than in others.

The history of the development of the arts of bronze and iron in this country has been marked by the same wave-like rise and fall that characterized

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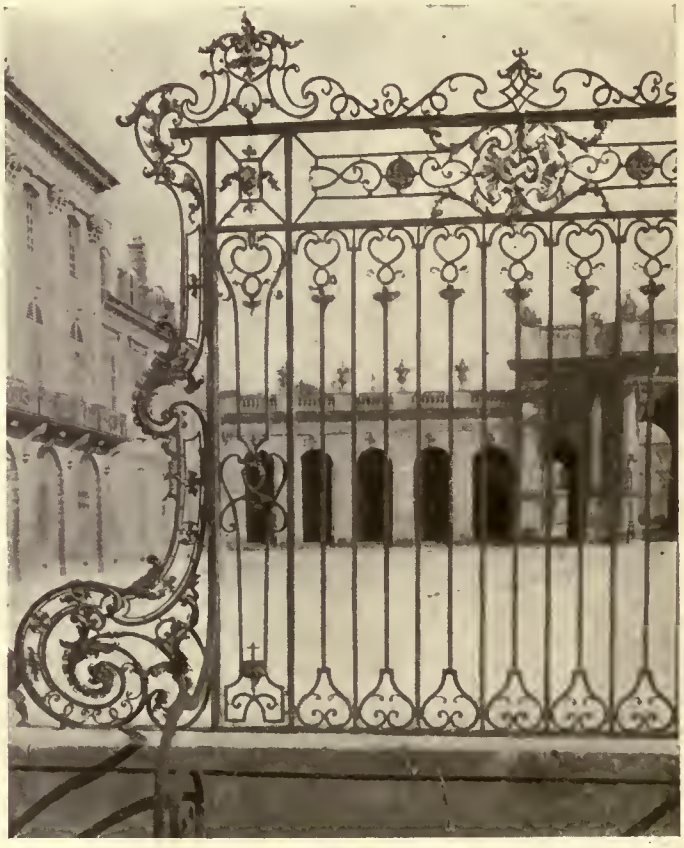
BRONZE ROMAN VESSEL
(FROM THE VATICAN MUSEUM)

it in Europe. Bronze is attaining its highest expression as an art. Iron had its best development during the periods of the sixteenth and seventeenth centuries. Both stand imperiled as to their future advancement for the reason that the very men who should be, and perhaps are, most interested in their development unconsciously retard it.

The greatest mistake is in the confusion of the art of the bronze and wrought iron worker with the labor of the mechanic. This error is unmistakable and is often that of men who, both by education and training, should be able to see the very broad distinction that exists. We have in this country workers in bronze and iron who in artistic ability excel many of those of an age when these crafts were believed to have reached their highest perfection. They only need opportunity, unhampered by the tendency toward commercialization of their art, to demonstrate this beyond dispute. But bronze and iron are in their artistic forms expensive, and, like anything of equal excellence, cannot compete in price with a shop-made substitute.

When an architect has completed his specifications and is prepared to ask for bids he varies little, if any, the method he adopts to secure such work of the artist craftsman as is contemplated from that of the grosser labor and material that goes into the fabric of his structure. There is consciously or unconsciously the same tendency to seek the "lowest bidder" and to accept some so-called "equal to" substitute that will in a sense serve the purpose. It is fair to assume that an art that is compelled to go into the open field of price competition cannot freely advance, and that the craftsman, realizing the tendency to commercialize his art, will soon become indifferent. Like other artists to whom appreciation is of great incentive value, the fine edge of their ability will be dulled. This attitude of architects, who as artists practise the oldest of all the arts, is to those having the best interests of these crafts at heart an incomprehensible thing. The opportunity to correct these conditions and to place the highest form of craftsmanship on the elevated plane to which it belongs lies in a large measure with architects.

The greatest influence for the advancement of craftsmanship as applied to Building Art doubtless rests with the Government. It is in the large monumental buildings erected at Government expense that architecture and its allied arts find opportunity for the greatest development. But it is just here that we are confronted by a condition that is having a retardant effect on everything that makes for the finer side of material development in this country. It is the debasing element of politics, the tendency to make a "job" of every transaction, from



DETAIL OF WROUGHT-IRON FENCE, NANCY

DETAIL OF BRONZE STAIRWAY, CHATEAU DE CHANTILLY

BRONZE LAMPS AND STANDS FROM POMPEII
NATIONAL MUSEUM, NAPLES

the smallest to the largest operation. A system that permits a "syndicate" to secure the contract for a building of which it never executes any part and the subletting and resubletting of different divisions, results in each case, from the largest contractor to the smallest, in the "pinching and pruning" of costs to make the biggest possible profits. It is between these upper and nether mill-stones that the craftsman is ground. He is compelled to resort to methods to forestall possible loss that sets the work of the artisan back for years.

These conditions of competition where the iron and bronze workers strive for contracts not only neutralize their better efforts but bring them into strong opposition with many other decorative products.

This rivalry leads to no good purpose. No art or craft can prosper while it seeks to exploit its own excellence and decries that of some other branch of craftsmanship. The tendency to depreciate the value of certain materials is the example often set by such influential mediums as the various trade papers.

We have precedent in that golden age of art in Italy, when the craftsmen in terra-cotta and other burnt-clay products, in iron, bronze, the precious metals, leather and fabrics of the richer sort, all worked toward one artistic end, of which the architect was the common mentor.

Perhaps it is a hopeless task to endeavor to bring about a millenium where one might witness the lion and the lamb in the arts of the craftsman dwelling together in harmony. The repose of the lamb inside the lion, so often commented on to-day, may be considered evidence of "good business," but this condition, along with others we have set forth, certainly will not advance the cause of good craftsmanship.

BRONZE ROMAN CASQUE

The man who, when peace reigned, traveled through Italy and France, where he might wander as inclination prompted in search of those things in which he had particular interest, did not fail to note the care, amounting to reverence, that was bestowed on the art treasures indoors and out that are the heritage of centuries of the highest development of craftsmanship.

In strong contrast to this very evident appreciation not only of the intrinsic but artistic

WROUGHT IRON AND BRONZE DETAIL, MONUMENT OF THE MEDICI, BY VEROCCHIO
CHURCH OF S. LORENZO, VENICE.

BRONZE AND IRON GRILLE, PARIS

value of these things are conditions that confront the saunterer along the streets of our large cities. An architect may with care and artistic ability design a façade of much beauty, only to have its details covered by the unsightliest of signs. Those who supply decorative features in which they take a proper pride as representing every ounce of skill they command will be righteously indignant at such mal-treatment of their work. We recall many examples: Iron balconies and rails hand wrought to such rare perfection as to make them works of art, serving as supports for poorly designed signs.

In a certain large building noticed in one of these walks about the city there was a pair of bronze doors of unusual excellence. But a few days later, on passing this building, it was found that carpenters had placed in front of the bronze leaves a pair of wooden storm doors. In order to get an anchorage for their work they had driven spikes and screws into the bronze and had carelessly and criminally marred the beauty of a work of art. We have much to learn in all these things. The lesson will take time in its learning.

Historic Ornament

"We should not, of course, be slaves of the historic styles," writes Huger Elliott in an essay on Monumental Design and Memorial Art. "But if we are to use any one of them our knowledge should be so thorough that we can adapt the ornament to modern uses while preserving its essential characteristics. If we are devising forms which cannot be classified historically, still more do we need a thorough knowledge of the underlying principles which have made the ornament of the great periods works of art. A new style—the 'American style' of ornament, let us say—cannot be produced to order. It will come some day, but the development cannot be forced. An individual may invent a recognizable type, but it will do little in establishing a distinctive national, or even local, style. Mr. Louis H. Sullivan of Chicago devised a peculiar form of ornament, quite effective in its way—but it has had no influence on the great mass of ornament produced. Not only is it very difficult to free ourselves entirely from the ornament used in the past, but it is next to impossible to produce forms which will be new and at the same time beautiful. We must first be clear thinkers; we must be familiar with the beautiful ornament used in the past, and know why it is beautiful."

GROUP OF BRONZE VASES FROM POMPEII
NATIONAL MUSEUM, NAPLES

WOOD PANELING
HOUSE NEAR EXETER

(A. D. 1600)

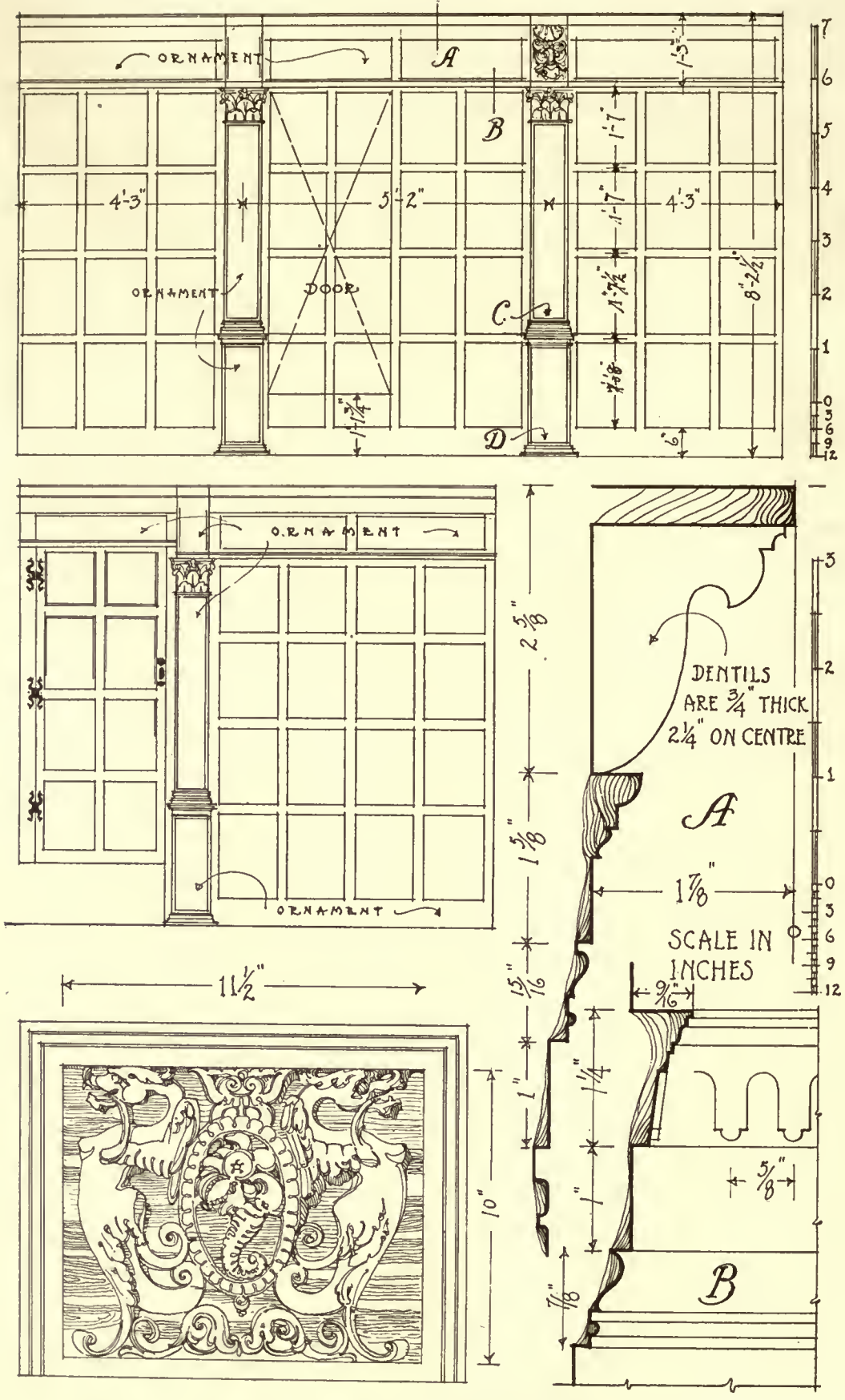
□ □

NOW IN SOUTH KENSINGTON MUSEUM

AMONG the many beautiful panelled rooms which the South Kensington Museum possesses there is no finer than that exceptional example, one of the best of the 18th century, which came from a house near Exeter. Only a part of what must have been a noble apartment remains; this is sufficient to indicate what the beauty of the room must have been.

DRAWINGS AND PHOTOGRAPHS
BY WALTER G. THOMAS

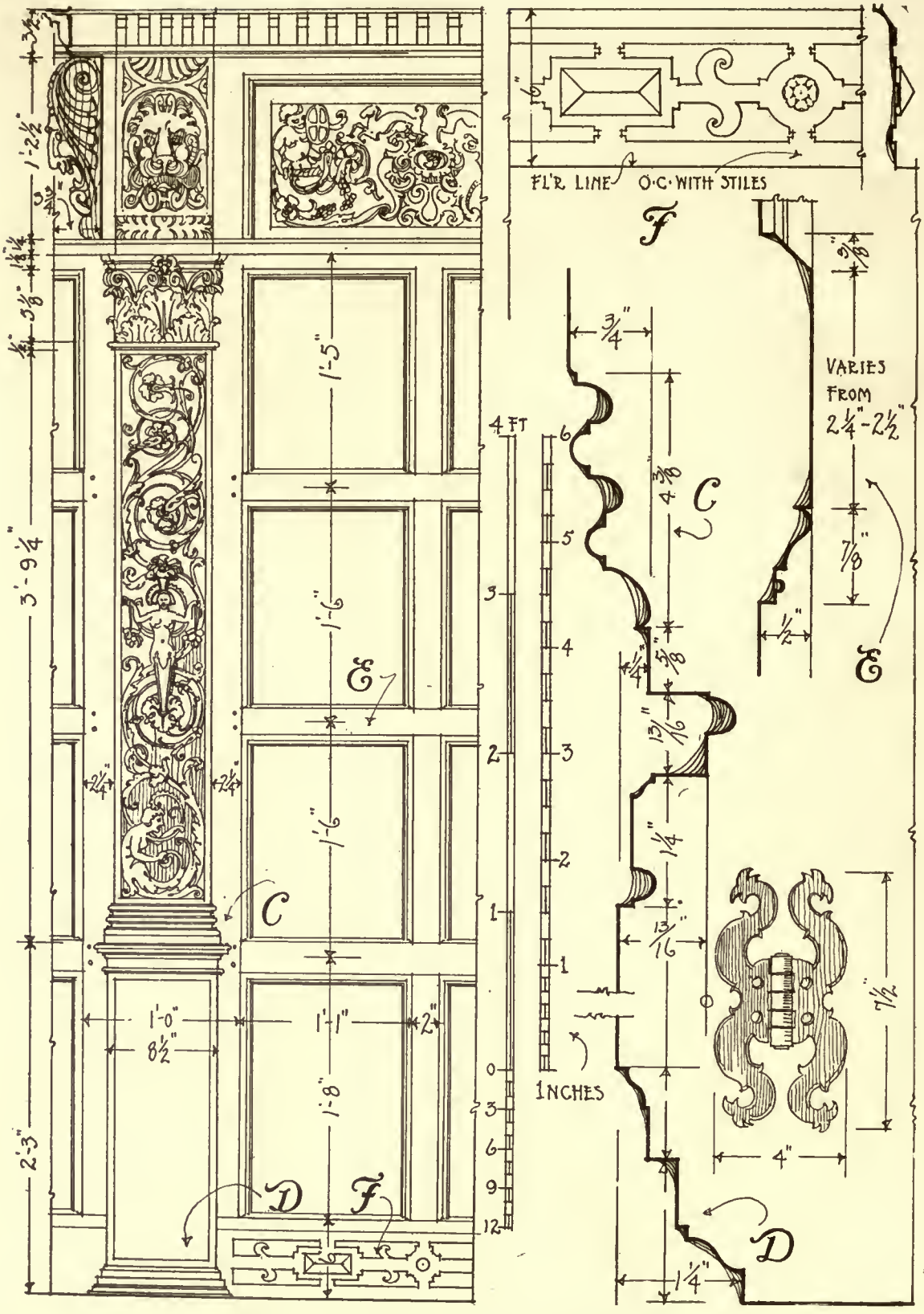
ENGLISH DETAILS
NO 4



WOOD PANELING FROM A HOUSE NEAR EXETER (A. D. 1600)
NOW IN SOUTH KENSINGTON MUSEUM

DRAWINGS AND PHOTOGRAPHS
BY WALTER G. THOMAS

ENGLISH DETAILS
NO. 4



WOOD PANELING FROM A HOUSE NEAR EXETER (A. D. 1600)
NOW IN SOUTH KENSINGTON MUSEUM

DRAWINGS AND PHOTOGRAPHS
BY WALTER G. THOMAS

ENGLISH DETAILS
NO 4

FRANKLIN NATIONAL BANK, PHILADELPHIA, PA.

FURNESS, EVANS & CO. AND McKIM, MEAD & WHITE, *ASSOCIATE ARCHITECTS*

FRANKLIN NATIONAL BANK, PHILADELPHIA, PA.

FURNESS, EVANS & CO. AND McKIM, MEAD & WHITE, *ASSOCIATE ARCHITECTS*

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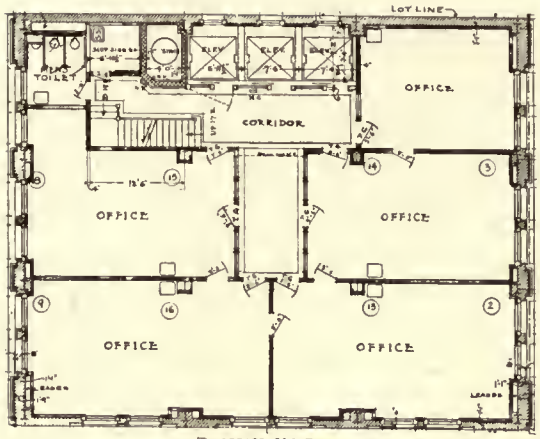
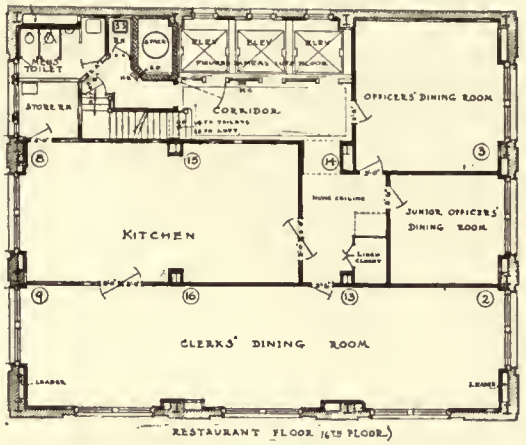
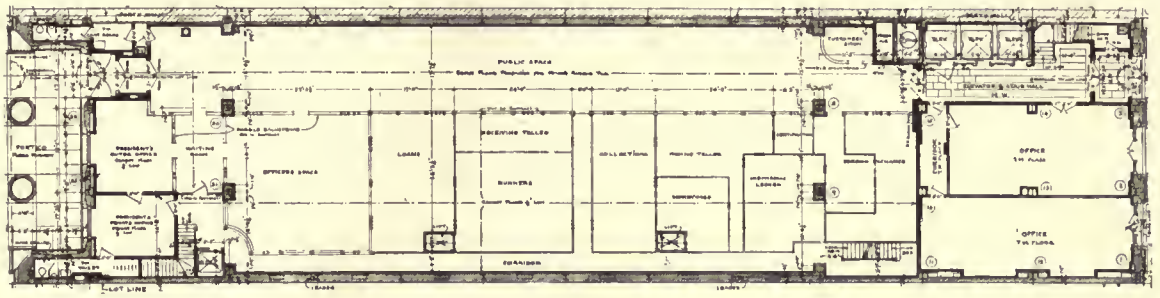


16TH OFFICE FLOOR.

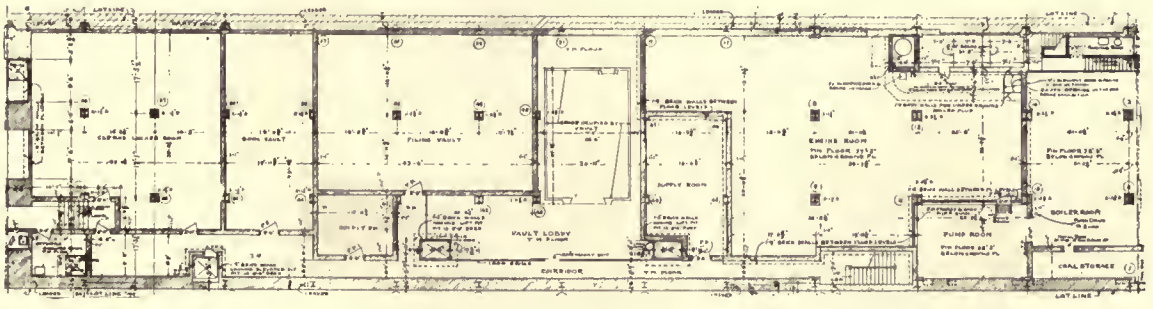


RESTAURANT FLOOR (14TH FLOOR.)

GALLERY FLOOR PLAN



GROUND FLOOR PLAN



CELLAR FLOOR PLAN

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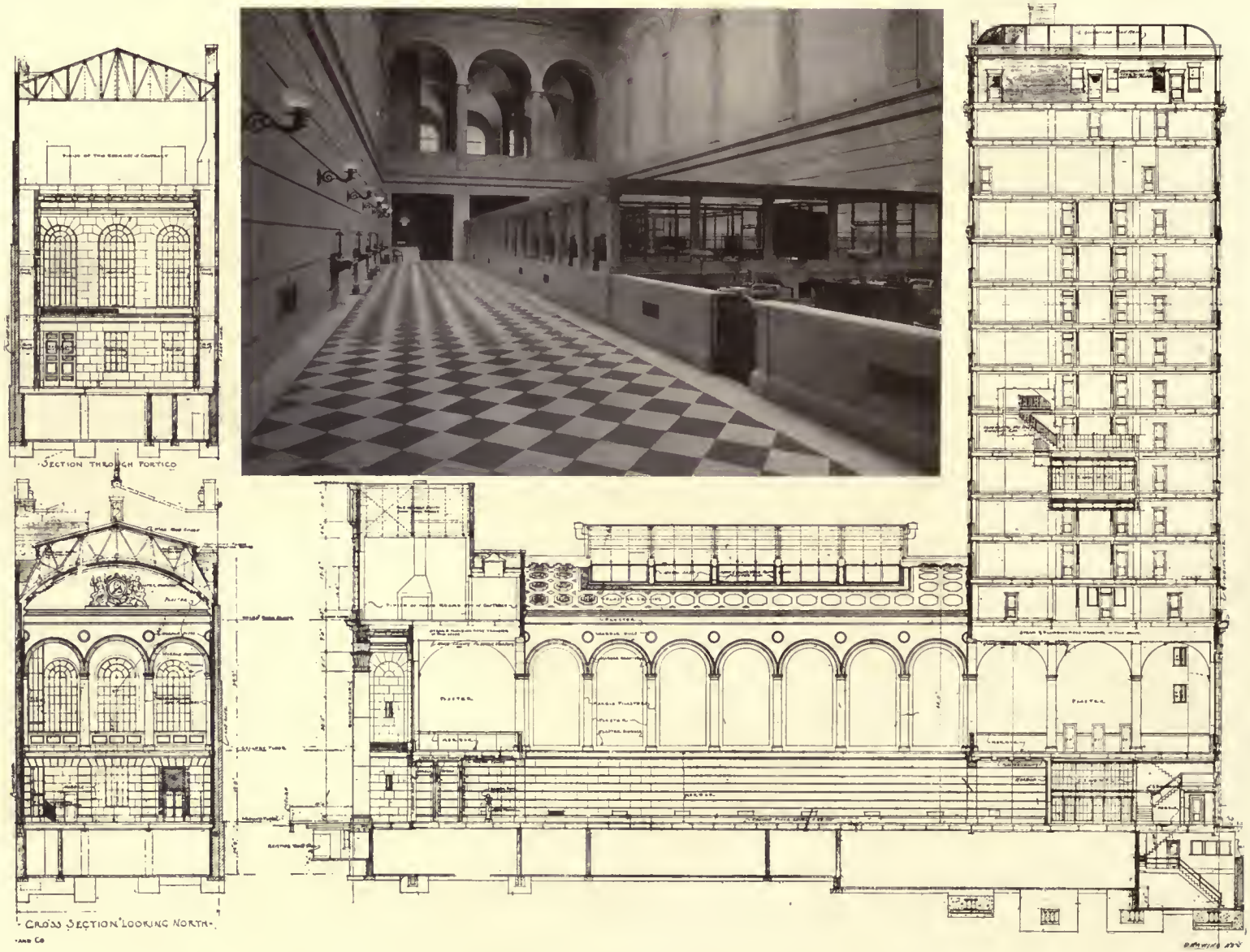

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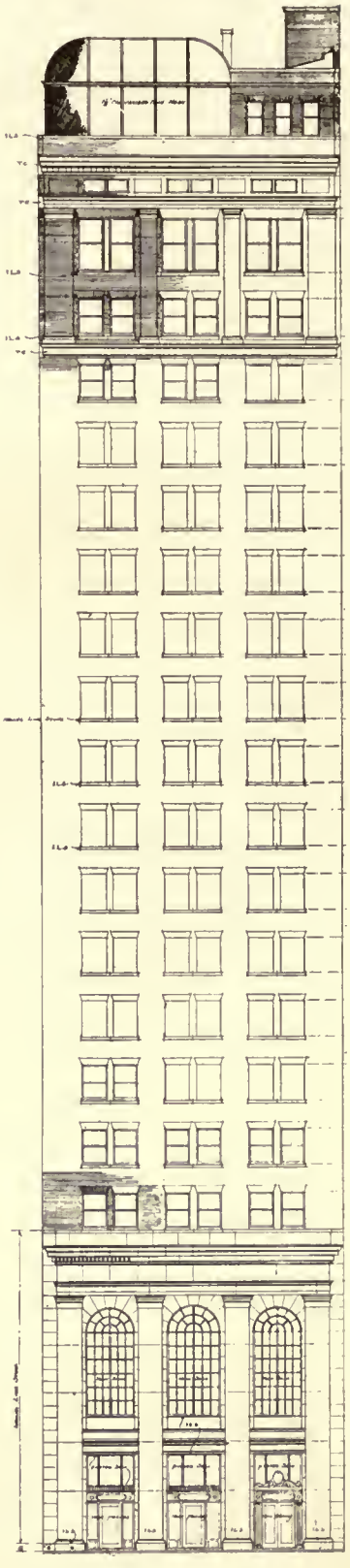

SANSOM STREET ELEVATION

FRANKLIN NATIONAL BANK, PHILADELPHIA, PA.

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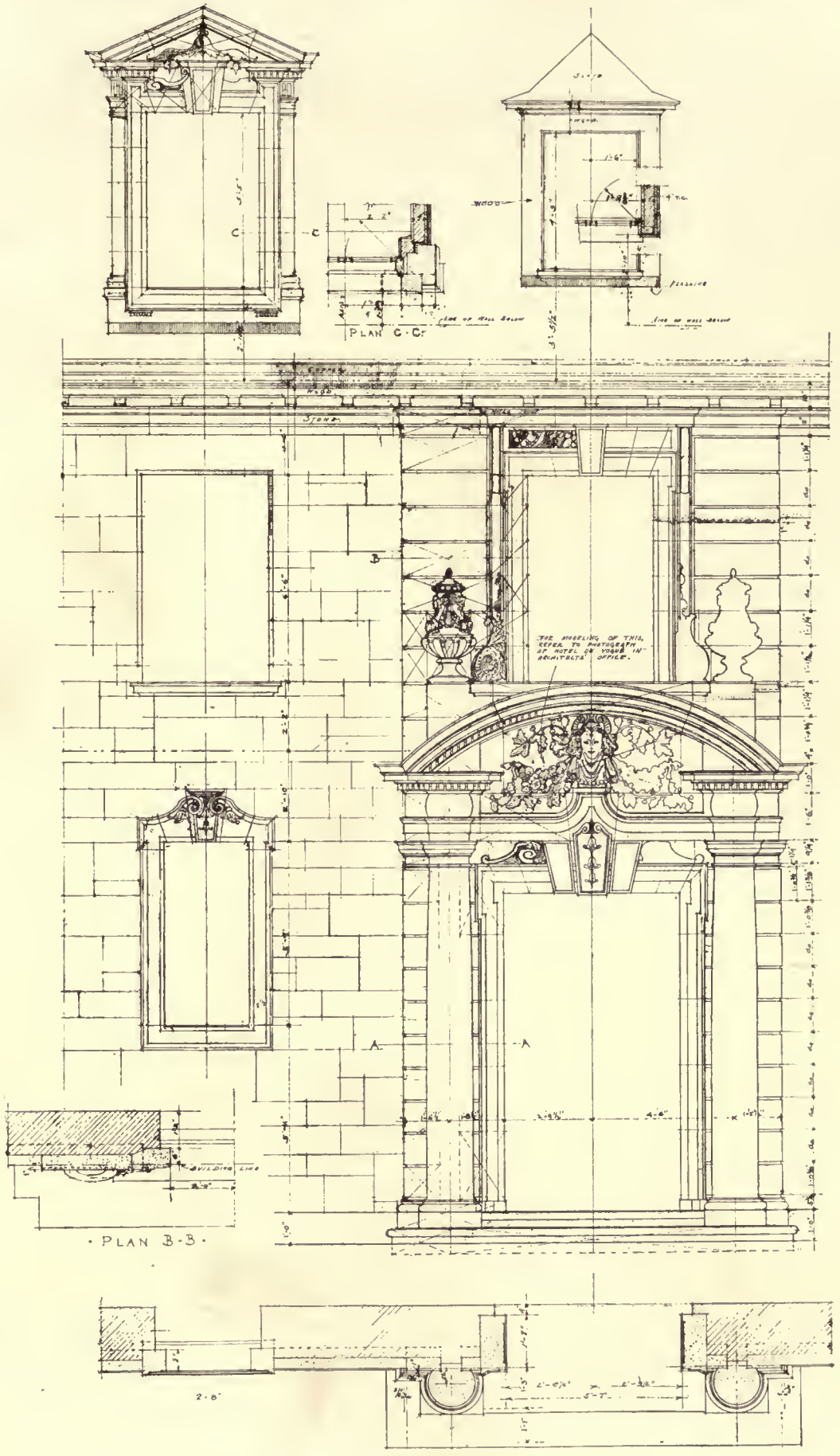

DETAIL OF MAIN ENTRANCE

RESIDENCE OF WM. B. THOMPSON, ESQ., GREYSTONE, N. Y.

MESSRS. CARRERE & HASTINGS, *ARCHITECTS*

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VOL. CXI JUNE 27, 1917 No. 2166

Restoring French Towns

THE architectural profession has through the Institute of Architects been among the first to offer the services of its members to the Government in whatever capacity they may be of most value, and without doubt these services will be used at least in part. It is also proposed at Champaign-Urbana, Illinois, to train architects to undertake the rebuilding of the devastated towns in France which have been destroyed, wantonly and otherwise, during the war. If this undertaking is at the suggestion of the French Government and merely implies a reserve force to be called upon to fill the depleted body of French draughtsmen, and who will work under French direction, well and good, but otherwise the idea has in it a self-confidence which becomes almost conceit. Heaven forbid that the towns of France should be formalized into model villages by the product of architectural schools, that the hydra-headed varieties of modern, smug, precise efficiencies should spread themselves in France, and that fiat communities should take the place of human, normal and individual growth. These towns have been Prussianized out of existence; they need not be resurrected by a similar system. The traditions of France are best understood by its own people. The charm of the past should not be obliterated by the complacent knowledge of the present. That that charm was not always coincident with cleanliness, or with sanitary conditions need not revolutionize the visual impression of the architecture. Restoration should occur where possible, but it should be carried out with sympathetic appreciation of the past, uninjured by modern vagaries. It may be that this note of warning is unnecessary and unwarranted by the facts, in which case it can be ignored. It may be the purpose of the Champaign-Urbana training to restore the French towns in the spirit of the past, in which case nothing but cordial co-operation can be desired. Incidentally, there is an appeal being made by a committee of American architects to obtain money to restore some one or more of the churches (monuments historiques) destroyed in this implacable war, as a gift to France, in appreciation of our great sympathy and of our debt to her. This offer has been made to the President of the Société des Architectes Diplomés, who has referred it to the French Under-Secretary of State for the Fine Arts, and it has been gratefully and enthusiastically received by all. No better tribute could be offered, entirely in accord with the best possible co-operation in relation to the work of restoration. It is sincerely to be hoped that French villages will still be attractive from their individuality, and not be merely model examples of the inhumanity of standardized architectural units.

C. HOWARD WALKER.

Rebuilding the Cupola of New York's City Hall

IT is somewhat amusing to note the arguments advanced pro and con for retention of the design bearing a clock for the cupola of the City Hall in New York.

That never-tiring correspondent to the editor of his favorite daily paper, "the old subscriber," is spilling much ink, and strongly urges the design that bears a clock. In this he is vigorously opposed by that equally strenuous rival "Vox Populi," who wants the early classic design that first topped the structure.

When the "watch" with lantern and bell patroled the village streets and called the hours and state of the weather he served a useful and very necessary purpose. We were then an early rising people. There were "chores" to be done and all the many things that marked the beginning of a farmer's busy day. He was, perforce, an early riser, and he must needs be informed as to the passing hours, that he might be up betimes and about his appointed tasks.

The town hall, with its clock, robbed the night watch of all his picturesqueness and his duties be-

came that of a constable, the forerunner of a police department.

The town clock became a necessity, and the lives of every dweller in the community took their regulation from its face.

Here in New York our forefathers were but carrying forward an old tradition when they put a four-faced clock in the cupola of the City Hall. At the same time they marred a good architectural detail when they altered the original proportions of the cupola to give space for the clock dials.

For half a century millions of New Yorkers regulated their movements by the City Hall clock, whose time keeping qualities were above the average. In that early time not every man and woman bore a watch. In fact, most men never owned a timepiece until they had reached majority, when, following a time-worn custom, they received a "gold watch" and chain to mark their entry into the ranks of citizenship.

To-day every one carries a watch—some two, one to mark the local time and another the time "back home"—so there ceases to be any good excuse for the introduction of a clock into the new cupola, especially when it interferes with the proportions of the design.

McComb's first idea for the cupola is shown by three sketches of plan and elevation, in the series of original sketches published in THE AMERICAN ARCHITECT, issue of February 5, 1908. None of them includes a clock.

Let us have the one that John McComb intended should surmount his matchless building, and not mar the beauty of the structure by following a precedent that would be "more honored in the breach than in the observance."

To Stimulate Building Activity in War Time

CHICAGO, with characteristic energy, has started a "Build as Usual" campaign.

A preliminary meeting has been held, participated in by the Building Constructors Employers' Association, the Illinois Chapter of the American Institute of Architects and the Illinois State Society of Architects.

Committees have been appointed whose duties will be to make a thorough inquiry into the present building conditions and to formulate reports for consideration.

Federal authorities have emphasized that the Government desires all projected building operations to proceed without interruption.

Howard E. Coffin, a member of one of the advisory committees of the Council of National Defense, has said:—

"Unemployed and closed factories, brought about by fitful and ill-advised campaigns for public and private economy, will prove a veritable foundation of quicksand for the serious work we have in hand. It is evident to every thinking man that our industries on the farm, in the shipyards, in the mines, in the factories, must be more prolific and more efficient. We need prosperity in war time more than when we are at peace. Business depressions always are bad and doubly so when we have a fight on our hands."

Men who are best informed as to the economic conditions now prevailing share Mr. Coffin's opinion. There should be no cessation of activity in any of the phases of building unless it can be shown that they interfere with the Government's plans for the progress of the war.

There is a certain timidity always apparent in great crises like the present, and the timid ones look to the Government and representative bodies for advice and council and the assurance they are unable to secure from their own imperfect perception of conditions.

Action such as has been taken by the Illinois architects and builders will foster a feeling of confidence and safety. It would largely contribute to the general sense of security if this action could be followed by a similar good example in other States.

Standardizing Structural Details

IN an article by Prof. Waterbury, printed elsewhere in this issue, in which he advocates as far as possible the introduction of standardized structural details, reference is made to the obstacles of such a method, due, he believes, to lack of uniformity in building laws. Efforts toward the framing of a basic building code have been made by a special committee of the American Institute of Architects for a number of years. New codes and revisions of existing codes have been put forth by many cities, and their success or failure in actual operation is being closely watched. In the report presented to the last convention of the Institute, the committee expressed the opinion that so conflicting were the main provisions of these various codes that it was not possible to find any middle ground of action on which a basis for the evolving of a code to be generally applied could be lodged. For these and other reasons, any attempt at a basic code would necessarily be postponed for some time. Meanwhile, in view of these conditions, and pending a codification of all the laws affecting building operations, it would seem that efforts "to secure a more perfect realization of the slogan 'Safety First'" rests entirely with the architect and the structural engineer.

The Businessman Architect—Part III

By S. J. T. Straus

OBTAINING FINANCIAL CO-OPERATION IN BUILDING OPERATIONS

THERE is one essential to the negotiation of a loan which I wish to impress upon the readers of this publication at the outset. It is the necessity of proper presentation of the project to an investment banker. Such a banker, when a proposition is presented to him, has two points which he desires to establish in his mind before negotiations are gone into fully. They are:

First—Is the loan one that would interest his House and merit further investigation?

Second—If it is, has the project progressed to such a stage that all its principal details are arranged and construction of the building can be started?

A banker does not care to waste the owner's time or his in useless discussion of a loan which would not at all interest him. Neither does he care to consider "dreams," full of impracticabilities, and impossible of execution. Hundreds of such propositions are presented to an investment banker every year, and a loan which bears the familiar earmarks of an impracticable, unsound proposition will naturally be placed in the same category by him.

How to Obtain Prompt Decisions

A loaning institution is desirous of making a prompt decision when a loan is presented to it for such action, but a thorough knowledge of the facts, and a businesslike presentation of them, is essential if this is to be done. Then, if the investment banker, from his superficial examination of the project, decides that the loan might prove attractive, will follow a more thorough investigation.

I do not wish, however, to give the impression that a loaning institution does not care to assist an owner in working out a financial plan—this is far from being true. It is willing to co-operate in this manner when a proposition is fundamentally such as would meet its requirements.

Those Dreaded "Requirements"

The requirements which capital demands of borrowers are usually of great aid to the latter. Every large investment house has in its employ a staff of practical real estate and construction men, who go into, thoroughly, every promising loan submitted, and judge it from a purely business standpoint. This examination is often the means of greatly improving a building project. These experts have a faculty of "spotting" weak points in a project, which might, if allowed to remain, seriously affect its success. Most of the requirements of a loaning institution are designed to eliminate these unsound features, and when they have been overcome the readjustment is usually not only more satisfactory to the loaning institution but also to the owner. The fact that a conservative house has approved of the project is at least a confirmation, by those qualified to judge, of the builder's judgment.

Changes are costly and cause serious delays. A knowledge of a loaning institution's requirements is of great value at the outset, and will sometimes prevent even the total rejection of a loan, which would necessitate starting all over again. In order to appreciate a loaning institution's requirements it is necessary to look upon the problem of how to make a building "pay" (for this is the final requirement of the investment banker), from two viewpoints. They are, that of the tenant who will occupy part or all of the building and provide the income; that of the owner who has invested his money and credit, and will expect a satisfactory return therefrom. The degree of skill with which the sometimes conflicting requirements of tenants and owner are balanced will naturally determine the financial success of the building.

Where Architect Comes In

It is in this connection that the architect can be of invaluable aid to his client, by reason of his ability to judge and appreciate both sides of the question. He can be the connecting link between the loaning institution and the borrower. He can facilitate negotiations and perhaps overcome difficulties standing in the way of the successful consummation of the loan.

I will try to give some of the fundamentals which a loaning institution will require.

1—Location

Usually the first question which will come to the mind of an investment banker in connection with a loan is, Where will the building be located? He will usually be guided by three considerations affecting the location. They are:

The need in a locality for a building.

The advantages which the locality will offer the building.

The permanency of this mutual adaptability, and prospects for its increase.

I can dismiss the subject of the need in a locality

for a building with a few words. This is based chiefly on individual conditions and is hard to generalize upon. But you may be sure that the investment banker will go into the subject very thoroughly—not only himself, but also through experts who are thoroughly familiar with the class of building involved.

Advantages Offered to Building by District

There is more to say, however, regarding the advantages a district will offer a building. For convenience in analyzing these the investment banker roughly classifies buildings in four groups—namely, residential, business, pleasure, and industrial. I will take each one separately.

Residential

Transportation—The tendency nowadays is for residential property to be located far removed from the center of the city. This is the result of the encroachment of business on residential sections, and the rapid development of transportation. An investment banker, with this in mind, will not favor residential property located near the center of a large city, because the future of such a district is questionable. Usually it will be composed of former residences which are now used as boarding houses, which naturally lowers the character of the district. There are, of course, exceptions to this general rule, but these are few and far between. As residential districts have moved far out, because of the development of rapid transportation, transportation is naturally one of the first essentials to such a district. And the investment banker recognizes that transportation does not alone consist of street cars, trains, subways or the elevated—he knows that the motor car has become an important factor in transportation, and if the building is located close to a boulevard or other means of direct motoring downtown, this makes the location all the more desirable.

Advantages and "Nuisances"—Although a residential section must be removed from the center of the city, it must be served by a good business center. Such features as proximity to parks, bodies of water and the like are important, and the district must be restricted against "nuisances" such as factories, saloons if possible, and sometimes schools.

Business

Downtown—Downtown business property can be dismissed with just a word. Such property is naturally assumed to possess almost every advantage.

Wholesale and Loft—With semi-downtown business property, such as that devoted to wholesale uses, there is one requirement which the investment banker will bear in mind. That is the need for such buildings to be located near the center of the city and accessible to depots, hotels and the like for convenience of out-of-town customers, but still well provided with shipping facilities. This accounts for wholesale and loft property being located just outside of the downtown district, sandwiched in between the former and the transportation centers.

Outlying—The most important requirement of outlying business property is the necessity for being situated as near as possible to its customers, as that is the only reason for its existence. This is the fundamental reason underlying the tendency of retail business districts to grow and move in the direction of the best residential sections. It is important, of course, that such districts be located on a street car line.

Pleasure

As with business property located in the downtown district, the subject of theater buildings and the like, in the center of the city, need not be discussed here. This class of property is also dependent upon residential districts, and as it is usually located in the business centers, the same considerations as to location affecting the latter will apply to property devoted to pleasure purposes.

Industrial

The requirements affecting the location of industrial plants are mainly those of proximity to sources of supply of raw materials and good shipping facilities by rail or water. Industrial plants do not necessarily have to be located in the largest cities, in the opinion of an investment banker. In fact, medium size cities sometimes offer cheaper labor, lower taxes, and better living conditions to employer and employees.

Stability

When the investment banker has proceeded this far in his analysis, the question of permanency has usually taken care of itself. If his investigation has proven that a district is in need of a building, there have been sound reasons for it; the same reasons insure the permanency of the need and future growth.

The reasons given above for the movements of districts often result in the complete transformation of a locality, and the architect should consider carefully the effect, certainly not advising a building project in a district whose future is unknown or speculative. He should select those localities which are on an upward trend, in line with the development of the city. If he does this, he will be in accord with the requirements of a loaning institution.

II—Building

After the location has been approved, the plans and specifications are carefully gone over by an expert in the employ of the investment banker. He estimates the cost of the building, and endeavors to suggest methods for reducing this and securing maximum utility value without detracting from the artistic. He is often able to accomplish his purpose. This man is usually a practical architect himself, and will work hand in hand with the architect of the building.

Income

The architect will find that the investment banker considers the income to be derived from the building of great importance. Adequate income is an invariable requirement of a loaning institution, and no amount of physical security will compensate for a small income. An investment banker will usually refuse to consider a loan where the net income is not sufficient to pay the maximum interest charge at least two and one-half times. Such a margin is necessary to insure proper reduction or amortization of the principal, besides providing a reasonable profit for the owner. I have explained the amortization plan in a previous article. As will be remembered, it provides for the maturity of about 5 per cent of the bonds per year after the second year. This offsets the depreciation, and, in addition, renders the loan more attractive for possible refinancing after maturity.

Monthly Payments of Principal and Interest

Another plan is supplementary to this. It is still new and has not as yet reached the popularity it deserves. In accordance with it the borrower is required to deposit, in advance, in a designated bank, each month, one-twelfth of the amount of principal and interest coming due during the current year. This is protection all around. It assures the prompt application of the earnings of the property as they accumulate to the payment of principal and interest, and does away with any tendency at all of the owner to divert these funds to other uses.

Importance of Standard Buildings

An investment banker does not look with much favor upon "freakish" buildings. Some owners are of the impression that if a building is out of the ordinary and distinctive it will be more favorably considered as security for a loan. The more attractive a building is, of course, the more desirable it will be to tenants. But when such a building is occupied by one concern, when an effort is made to create unusual and ornate design, it is not likely to be maximumly successful financially. Such features add to the cost without increasing the income. The most profitable building, best suited for security in a loan, is that occupied by a number of tenants—thus providing varied sources of income; and of a standard character, easily adapted to the requirements of many firms.

In a previous article I have discussed the mistakes which are sometimes made in under- or over-improved property. I will not dwell upon the subject here, but wish to mention it as being a consideration of the investment banker in judging a loan.

III—The Borrower

There are three requirements of a borrower—namely, character, financial responsibility, ability. The late J. P. Morgan used to say that if the borrower possessed a spotless character he would consider him an excellent risk. While the average investment banker will not go as far as Morgan, character will, nevertheless, be a most important consideration with him. Combine character and a demonstrated ability in connection with the class of building which will be erected, and the owner has progressed a long way toward establishing himself in the banker's confidence.

Financial Responsibility

Financial responsibility does not mean that a borrower must be possessed of unusually large means, but does require that his resources be in proportion to the size of the undertaking. "Shoestring" operators will not get very far with a conservative investment banker.

If a corporation is to be formed and stock sold the investment banker will inquire into the financial plan. His advice in working this out will usually be of great value to the owners, and you can be certain of one thing—he will not allow any proposition to go through which is not thoroughly worked out and sound in every particular.

Before the investment banker will allow construction to begin, he will assure himself that the amount of money on hand is sufficient to complete the building free and clear of all mechanics' liens.

* * * * * * *

One more word about the architect. He can be, as I said at the beginning of this article, the connecting link between the loaning institution and the borrower, and one of the most important services he can render his client is that of bringing him to the logical loaning institution. Investment bankers' requirements vary, and while one may decline a loan because it is not within his scope or field of operation, another will accept it. It is therefore important that the businessman architect place himself in close touch with investment bankers, so that he can be in a position to advise his clients when he is consulted regarding financing.

WROUGHT IRON GRILLE, VIENNA.

Structural Details

By L. A. Waterbury

Professor of Civil and Architectural Engineering, University of Arizona

To the architect who will ask himself the question, "What faults are prevalent among the designers of American buildings?" one answer which will be likely to come into his mind is the use of poorly designed details. The demand for haste, which is ever present, allows but scant time for the consideration of the most important details, while multitudes of minor parts receive absolutely no scientific investigation. This general criticism applies throughout the range of structural work, from the smallest to the largest job. In the second attempt to build a Quebec bridge, the suspended span was plunged to the bottom of the St. Lawrence River, because a temporary support was inadequate for its purpose. The details of structural steel design have been more carefully studied than the details of many types of construction, but even in this field the faults have not all been eliminated; for timber construction, it is not uncommon to find joists, headers and trimmers so inadequately framed that the connection details are capable of supporting but a fraction of the load which the joists themselves can carry; and, in concrete construction, the jobs are legion in which, although the main sections may have been carefully proportioned, satisfactory details appear to be the exception rather than the rule.

If the condition which has been described is not overdrawn, it behooves American architects and engineers to give some thought to ways and means whereby it may be possible to secure a more perfect realization of the slogan, "Safety First." To the writer, one feasible line of progress appears to be an increase in the use of standard details. Under some conditions the use of standard parts should result in increased economy, and in most cases in which such a practice has been introduced economy rather than safety has furnished the motive force. Consider, if you will, the advantage of the use of standard parts from the standpoint of safety. A particular job is at hand for which some detail, say a column footing, is needed. If reinforced concrete is the material to be used, items which should be considered will include bearing area, punching shear, diagonal tension, area of steel, and bond stresses. Lack of time frequently prevents a careful consideration of all such elements, and so the main dimensions are likely to be computed, while

in other particulars the part is assumed to be satisfactory. Furthermore, a considerable amount of structural drawings is prepared by draftsmen who have not had sufficient training in applied mechanics to appreciate the needs of every case. In either event, there will be a greater probability that the design will be both safe and economical if a standard detail of footings is at hand, from which the proper dimensions and required materials can be selected, than if a hasty design is made for the special case. The preparation of standards is likely to be intrusted to those who will best appreciate all of the elements which need consideration, as a result of which items of importance are not likely to be either overlooked or ignored. Other advantages resulting from the use of standard parts are: (1) increased speed in the execution of plans for any particular job, (2) advantageous employment of office force during slack periods, and (3) the use of standard details results in greater ease and certainty in the estimation of quantities.

In addition to that which has been mentioned, a further advantage, the elimination of a part of the work of detailing, might be obtained by a consistent use of detailed parts. As yet, this idea is largely visionary, except in certain lines of work, for the reason that any considerable application of the method requires a more or less general acceptance of certain standard details. In steel construction this method at present has considerable application, only general drawings being furnished to the contractor, who must do his own detailing as well as furnish the materials. In the field of reinforced concrete, suppose there should be available standard details for all of the ordinary beams and girders encountered in ordinary practice. Under such conditions a simple line drawing of a floor plan, on which would be indicated the section size and number of each member and the number for the standard detail to be used for each end of each member, would furnish to the contractor as adequate information for his use in bidding as is afforded by the average present detailed plan, and the work in the architect's office would be much simplified. Special members could be more fully detailed, and where needed additional working drawings could be furnished during the progress of construction.

Probably the most serious obstacle to any general standardization of structural parts is the present lack of uniformity in building laws. Some of the national technical societies have done excellent work in the preparation of standard specifications, as, for example, the Report of the Joint Committee on Concrete and Reinforced Concrete; but even this is only a beginning. The co-operation of architects and engineers is needed to secure legal recognition of uniform fundamental requirements in the building codes throughout the United States, and to secure regulation which, in each State, shall be at least state-wide. The present practice of delegating to each city the determination of the regulations which it may desire leaves large areas with no restrictions whatever, as a result of which many buildings of more or less importance are erected which are positively unsafe. In the southwestern portion of the United States one thing which is in evidence in nearly all building work is the tendency toward cheap construction. The architect and the contractor are, for the most part, free to curtail the materials used to the minimum which conscience will permit; and, to make a bad matter worse, the plans for nearly all buildings of a public character are obtained by competition. Naturally, the architect who will present the most attractive plans and who will guarantee the largest amount of desirable space for the given appropriation is nearly certain to win the prize. Poor appearance and a poor arrangement of plan are often apparent from an inspection of preliminary plans, but it would be an exceptional item affecting the safety of the structure, which could be thus detected. Such a condition must result in forcing the architect to take undesirable chances, in the assumption of live loads, in the allowable stresses which are used and in the use of insufficient details. For localities now having no restrictions, the first problem is to secure some good building code, but when this is being adopted the more closely it can conform to accepted standards the better it will be for all concerned.

When the ideal of uniform building regulations shall have become a reality, further advancement may be achieved in the standardization of structural details. In the field of steel construction, the steel companies and the American Bridge Company have used standard details which have been widely adopted, but in other lines of construction a corresponding standardization has not been attained. Manufacturers of special types of reinforcing materials have distributed details, applicable to the particular lines of concrete work for which their products are used, and many offices have standards for their own use. However, it is the writer's belief that an investigation of architectural offices throughout the United States would reveal but a few of the best and largest in which the standardization of details has been systematically studied. The average office waits until the need arises and then designs the part to fill the place. When, at some later time, a similar part is required, the detail is copied, and so it may frequently happen that a detail which is neither efficient nor economical may come to assume the role of a standard in an office.

The writer realizes that it is much easier to criticise than to do right, and this discussion is offered

in no spirit of condemnation, but rather it is given in the hope that it may stir some to consider, each for himself, what may be done to place his own practice upon the best possible basis, and what may be done to attain the highest efficiency for the entire profession.

Recent Legal Decisions

MECHANIC'S LIEN CAN BE FORECLOSED BY IMPROVEMENTS MADE ON A VERBAL AGREEMENT THOUGH THE ONE WHO SELLS AFTERWARD REFUSED TO KEEP HER PROMISE TO MAKE DEED. —Suddard *v.* Lewis. Supreme Court of New York, 162 N. Y. S. 493.

By a parol agreement the defendant, who was the owner of a village lot, agreed to sell it to the plaintiff for $70 and to deed him the property as soon as her deed came back from the county clerk's office, and it was agreed that the plaintiff should have the privilege to go on the lot and build a cellar wall and foundation at once, and before the deed was made. Plaintiff entered upon the lot, built the cellar wall and foundation, which cost $73.50 in work and material, and thereupon the defendant repudiated the contract and refused to convey the premises, or pay the plaintiff for such improvements. Plaintiff filed a mechanic's lien for the material and work, and in this action to foreclose the lien it has been determined that he has no lien, as the improvements were not with the consent of the owner. It is inequitable that the defendant may have the benefit of the improvements without paying therefor. At the time the agreement was made, she either intended to carry it out or to repudiate it and get the benefit of the improvements. There is nothing to indicate what, if anything, caused her to change her mind, and repudiate the agreement after it was made. The plaintiff clearly contemplated that he was making the improvements for his own benefit, and very probably the defendant contemplated that the improvements were being made for her benefit.

There can be no quarrel with the cases which hold that, where a purchaser upon an executory contract of sale has the right to enter into possession and make improvements before conveyance, and fails to perform the contract upon his part, the vendor cannot be charged with the value of improvements made by or for the vendee under such circumstances, and in that manner be improved out of his property. This is not such a case. The parol agreement, when made, was void, under the statute of frauds, and if the defendant did not carry it out the improvements as matter of law would be for her benefit. Her consent, therefore, that the plaintiff might enter into possession and make the improvements, followed by her refusal to carry out the agreement and convey the premises, may well be considered a consent under the lien law that the improvements be made. The parol agreement, and its breach by the defendant, are only important to show that the improvements were made upon her land with her consent and for her benefit. She cannot repudiate the agreement, and then claim that the plaintiff, as owner, made the improvements upon her land for his benefit. By repudiating the agreement she elects to appropriate the improvements and to treat them as made upon her land with her consent and for her benefit. Perhaps the easier remedy for the plaintiff would have been an equitable action to compel a specific performance of the contract, but his failure to resort to that remedy ought not to prejudice him here. Presumably the value of the premises has been increased by the cost of the improvements. No injustice is done the defendant, equity is satisfied, and the law is not strained by holding that the defendant so far consented to the improvements that the plaintiff has a valid lien upon the premises therefor.

The judgment should therefore be reversed upon the law, and the facts, with costs, and judgment directed for the plaintiff, adjudging the validity of such lien and providing for its foreclosure, with costs.

ARE "FOUR FAMILY FLAT" BUILDINGS "UNHEALTHFUL"?

This question was before the Supreme Court of Minnesota and decided by them on May 11, 1917, in a case entitled State ex rel. Roerig vs. City of Minneapolis, reported in 162 Northwestern Reporter, page 476. Roerig and others sought a permit from the Minneapolis inspector of buildings to erect a four-family flat building within the residential district of the city and the permit was refused for the reasons that the same would be "unhealthful, cause congestion, added fire risk and greater difficulty in police supervision." The court referred to a former case decided: State ex rel. vs. Houghton, 158 Northwestern, page 1017, in which case it held that "prohibiting the owner from erecting a store building upon land within a residential district" is beyond the police power and therefore void; that the "store building" case and this "four family flat" building case were alike and, therefore, ruled that Roerig was entitled to a permit to erect the four-family flat building in the residential district.

American Architects in the War

The following members of Washington State Chapter, Seattle, Washington, have joined the colors: J. S. Cote, Corps of Engineers; W. Marbury Somerville, U. S. Navy; H. O. Sexsmith, First Sergeant American Ambulance Corps No. 12.

Draughtsmen who have enlisted are: Philip French, Second Lieutenant Washington Coast Artillery; Clarence George, Washington Coast Artillery; George Haugen and C. F. Cole, aviation division of the Signal Corps, now in San Diego, Cal.; Clare Kenney, at the Officers' Reserve Corps, Presidio, Cal.; Arthur Anderson, Coast Artillery; Burton Carr, Officers' Reserve Corps; F. A. Hansen, Navy; Charles Williams, Radio Service, Bremerton Navy Yard; Herman Lindhaust, Coast Artillery; L. J. Bain, Outpost Company, Signal Corps; E. W. Elwell, Naval Reserve Officer, and Walter Bogart, Signal Corps.

New Discoveries in Pompeii

Interesting discoveries continue to be made at Pompeii. A large house belonging to one Trebius Valens in the Street of Abundance has been found in an excellent state of preservation. Other fine private houses have been excavated in the same street, but large shop windows and artisan premises suggest that it was of more business importance than even the Stabian and Nola Streets.

Civil Service Examinations

The United States Government announces an open competitive examination for mechanical draftsmen for vacancies occurring in the office of chief of ordnance, War Department, at Washington, at salaries ranging from $1,000 to $1,400 a year. On account of urgent needs of the service, applications will be received at any time and the papers will be rated immediately upon their receipt in order that the appointments may be made with the least possible delay. Applicants should apply to the Civil Service Commission at Washington for Form 1312.

Also an examination will be conducted under the same general rules for a vacancy in the position of assistant to the chief draftsman, Watertown Arsenal, Watertown, Mass. The duties of the position will be the design and construction of ordnance materials; design under the general head of mechanical engineering, and the supervision, when required, of the work of the drafting room. Apply to the Commission for Form 1312, stating title of examination required in each case.

Lining Up the Architects for Service

An important work is being accomplished by the various State Chapters of the American Institute of Architects in carrying out the request of the Council of National Defense that a census be obtained of architects willing to serve the Government in the various departments where such technical services as they might offer would be useful.

Each chapter is compiling a list in which every qualification of each man enrolled is set forth. By this very wise method we may be sure that every man that goes into the service will find work awaiting him for which he is best qualified, and we shall, it is to be hoped, be spared experiencing the unfortunate conditions that beset the profession in France and England during the early months of the war.

Heat-Insulating Efficiency of Materials

Study of the results of an investigation of the heat-insulating efficiency of various materials has been made by the United States Bureau of Standards, and although absolute statements would not be warranted at present, certain preliminary conclusions have been stated. In general, it appears that gypsum shows a greater efficiency as a fire-insulating material. Concrete and clay vary somewhat, depending upon their porosity. The denser clays conduct the heat a little more rapidly than concrete. The more porous clays, however, conduct heat somewhat less rapidly than the concrete. The effect of the aggregates on the concrete is not very marked in changing the relative conductivity. There is little difference in this respect between gravel, trap rock, slag and soft-coal cinder aggregate. Limestone concretes, however, seem to stand out as giving a much lower conductivity. There was found to be but little difference between the behavior of the gypsum specimens furnished by different manufacturers. The dense high-plaster mixtures give much better results than the porous low-plaster, high-water mixtures.

Federal Committee on Lumber

To facilitate the operations between the Government and the producers of lumber, the Council of National Defense has appointed a subcommittee of fourteen on lumber and forest products, with R. H. Downman, of New Orleans, president of the National Lumber Manufacturers' Association, as chairman.

Bernard M. Baruch, chairman of the advisory commission's committee on raw materials, in making

the appointment, said he believed the personnel was such as to insure a high degree of efficiency in meeting the lumber needs of the Government. Mr. Downman and several other committee members are to maintain a permanent organization in Washington.

Other members of the committee are: D. O. Anderson, Marion, S. C.; Henry S. Graves, chief forester, United States Forest Service; Charles S. Keith, Kansas City, Mo., president of the Southern Pine Association, and W. H. Sullivan, Bogalusa, La.

Test of Hollow Tiles

A series of investigations of the strength of hollow tiles as developed in walls of varying thickness has been started at the United States Bureau of Standards by the construction of a number of these walls 5 feet long by 12 feet high. The walls so far constructed are of three thicknesses—6, 8 and 12 inches. Those already laid up have been set with the tile on end. It is proposed to construct walls of similar size with the tiles placed on their sides. Other variables will enter into the work, and when the investigation is completed about 50 will have been built. Some of these will be tested by direct compression; others by applying a load across the middle of the side with the purpose of determining somewhat the ability of these walls to withstand wind pressure.

The investigation has been undertaken at the request of several manufacturers of this material. Some of the data will be made available for the American Society for Testing Materials, which is now engaged through one of its committees in adopting specifications for hollow building tile.

Rheims to Be a Pantheon

France Will Dedicate Ruin to the Dead of All the Allies

Conversion of the battle-torn Cathedral at Rheims into a pantheon for the unidentified dead of all the armies fighting in France for the common cause of democracy has been determined upon by the French Government.

The plan, to be put into execution as soon as the war is over, was announced in despatches to the headquarters in Washington of the French Restoration Fund. It is proposed that the Cathedral shall not be restored, but that representatives of all the Allies shall place their battle flags within what remains of the historic edifice, which then shall be formally dedicated as a monument to the heroic dead.

Arab Reed Architecture and the Arch of Ctesiphon

In an interesting communication to the *Architectural Association Journal,* Mr. A. N. Peckham, A.R.I.B.A., describes the construction of Arab huts, and infers from them the derivation of the arch of Ctesiphon:

"As we understood that we should have to spend the hot weather here (Mesopotamia), and no 'European pattern' tents were obtainable, our C.O. was told to obtain reeds and reed mats locally and build huts of the Arab pattern. I had got an insight into the construction of the Arab hut just before, as we had been at work at road-making and I had had to pull down two or three. Their construction is as follows: Two rows of holes are dug, the rows some 10 to 12 ft. apart, and the holes spaced at about 5 ft. centers; in each hole a bundle of reeds is planted and the earth rammed home around them. The tops of the bundles are then drawn inwards till they overlap the tops of the bundles in the row opposite to them, when they are lashed together. The result is a series of arch-shaped reed principals of 10 to 12-ft. span and 5-ft. centers. On these principals are lashed purlins made of small bundles of reeds, and over this framework is fixed the 'skin,' consisting of either reed matting or of a row of reeds with their bases buried in the ground in the same way as the principals.

"I have not had the opportunity since seeing these huts to study any photos or any drawings of it, but it seems to me that the great arch of Ctesiphon is clearly a copy in stone of the indigenous style of reed architecture. Further, the shape naturally taken by these reed arched principals is not a half-circle, but a semi-ellipse; and, if my memory of pictures serves me, that is the shape of the great arch of Ctesiphon.

"The dimensions I have given are those of the ordinary huts in the Arab villages in the Tigris and Euphrates marshes, and are the average sizes obtainable with simple bundles of reeds. In some of the villages, however, I have seen some large halls of some 20-ft. span, with principals made up of several lengths of reeds, and our troops when building huts make them of 15 to 18-ft. span.

"In this way we built huts for all the British officers, of 10 ft. by 15 ft. and about 6 ft. to the crown of the arches. This height most of us increased by digging down one or two feet. I put two layers of matting on top, but in the heat of the day we had to wear topees inside our huts, though I may say they were more sunproof than the Arab's camel-hair tents, inside which I have been able to see my shadow quite distinctly."

The R. I. B. A. Obiter Dicta on Architectural Education

The following interesting paragraphs are extracted from a report published in the May issue of the *Journal of the Royal Institute of British Architects* of the recently held Conference on Architectural Education:

Composition a Constant

The Americans, in their adherence to the policy of studying precedent for internal and external character, have demonstrated two things—the first being that the underlying system of composition, at all periods, has never varied; and the second, the immediate necessity for augmenting the local Colonial tradition by drawing upon historical models. The Americans on this account are not plagiarists; they are scientists, with all the system of the Germans, but free from the doctrine of the Pikelhauben. —*Mr. A. E. Richardson.*

The Indescribable Something

The possession of the divine afflatus, or inflatus, or inspiration, or whatever it is, is the indescribable something which knits us together. It is that which filled the soul of the youngster with enthusiasm for the work of Norman Shaw: we knew nothing about his construction, or the masterly way in which he handled his clients, but we were charmed by the inexpressible art of his designs. And it is the same always; it was also the same with Street.—*Professor Beresford Pite.*

The Essential Thing to Teach

Others can build, but the only person who can design is the architect. He arranges structures to serve their purpose and to express ideas; if he does not do it, no one else will. This seems to be the one thing that will justify his existence in the future, and therefore the essential thing to teach.—*Mr. A. R. Jemmett.*

Architectural Department, Syracuse University

The Architectural Department of the College of Fine-Arts, Syracuse University, owing to its rapid advancement, has outgrown the quarters formerly occupied and will, on the opening of the new year, be housed on the top floor of the new Slocum Memorial College of Architecture.

Mobilization Camps

Congress appropriated $77,000,000 for mobilization camp construction. At first thirty-two cantonments were contemplated. Construction will be largely in the form of wooden barracks. The division of cost in the construction of these camps as originally estimated was as follows: Temporary buildings to shelter troops, horses and supplies, $40,500,000; temporary hospitals, $2,125,000; water and sewer systems, $2,150,000; electrical lighting, $605,000; roads and drainage, $5,040,000; target ranges, $2,015,000; refrigerators, $270,000.

Rhode Island Chapter, A. I. A.

Five members of the Rhode Island Chapter of the A. I. A. have joined the Rhode Island Citizen Constabulary.

Cleveland Chapter, A. I. A.

Officers for the ensuing year, elected by Cleveland Chapter, A. I. A., are as follows: Charles S. Schneider elected president; Herbert S. Briggs, vice-president, and Harry E. Weeks, secretary-treasurer.

Personal

William H. Schuchardt and Walter W. Judell, architects of the firm of Schuchardt & Judell, Milwaukee, Wis., announce the removal of their offices to 508-510 First National Bank Building, that city.

Book Note

Interior Wiring and Systems for Electric Light and Power Service. By Arthur L. Cook. Full flexible leather, 416 pp., size 4½ x 7. Price $2.00 net. New York, John Wiley & Sons, Inc.; London, Chapman & Hall, Ltd.

While this book has, primarily, been prepared for electrical workers, it contains in a compact and easily accessible form a large amount of material on electrical installation that will be valuable to architects and those who write specifications.

It is divided into three sections or parts, treating respectively of electric lighting systems, electric power systems and interior wiring.

An appendix contains 47 tables of data, performance of various types of lamps, power requirements, dimensions and the standardization of various accessories and factors in electrical illumination.

Industrial Information

School Signaling Appliances

W. R. Ostrander & Co., 371 Broadway, New York City, have issued a new booklet describing and illustrating their strap key board systems of signaling and accessories for schools. Their Type B system is the standard adopted by the New York City Board of Education, and is worthy of investigation by architects interested in school planning.

The Hubbellite

With the expressed belief that "nothing lubricates the wheels of business like a little oil of friendship," Harvey Hubbell, Inc., of Bridgeport, Conn., manufacturers of electrical appliances, publish a house organ containing interesting talks on merchandising in general and the advantages of handling Hubbell electrical fixtures in particular. The booklet is published frequently, and the name of an inquirer will be placed upon the mailing list upon request.

Winter Construction

The story of the construction of a five-story building at Bridgeport, Conn., in the dead of winter, begun Jan. 12 and ready for occupancy on May 31st, is published in Bulletin No. 19 of the Turner Construction Company, 11 Broadway, New York, builders of concrete construction. The booklet tells of troubles encountered with freight embargoes, excessively bad weather and changes in the plans, all of which were overcome. Other winter jobs are described in less detail, with illustrations showing buildings completed or in process of construction.

California Redwood

Every architect undoubtedly knows the possibilities of California redwood for both interior and exterior purposes, but it is quite probable that the full extent of its adaptability for a thousand uses and effects will not be realized until an inspection has been made of a splendid publication on the subject issued by the California Redwood Association, San Francisco. Numerous colored plates serve to show the many beautiful grains and finishes that may be obtained from this wood, and the story of its advantages in dimension for paneling, "easy working" qualities and other features is illustrated strikingly. The association maintains a service bureau for the benefit of architects and others who would learn more of the details of the possibilities of redwood for specific purposes. Address the service bureau of the association, San Francisco, Cal.

"Flexsteel" Products

The National Metal Molding Co. of Pittsburgh, manufacturers of electrical conduits and fittings, have issued Bulletins Nos. 201 and 400, descriptive of their Flexsteel armored conductors, conduits and fittings and stamped steel fixture studs. Each bulletin is bound in a correspondence folder, indexed for filing by subject or alphabetically, in accordance with the standard plan the company has adopted for its bulletins. The two publications above mentioned follow Bulletins Nos. 50, 151 and 350, covering rigid conduits, non-metallic flexible conduits and locknuts and bushings respectively. Announcement is made that other similar bulletins are forthcoming to replace the looseleaf catalog formerly issued by this company.

Life Out of Doors

To-day, when the element of outdoor living is evident in almost every home, from the sun-porch or the pergola of the man of moderate means to the extensive and carefully planned gardens of the more fortunate citizen, the design of outdoor furnishings is an important question. The Mathews Manufacturing Company, 911 Williamson Building, Cleveland, Ohio, designers and manufacturers of garden furniture, have a catalog for distribution, containing seventy-four pages of illustrations and price lists on arbors, pergolas, gateways, trellises, fences, summer houses and garden furniture, from the plainest to the most elaborate. This is a booklet entitled "Garden Craft," which has been carefully prepared to be not only useful but interesting.

"De Luxe Heating"

Under the above title the General Fire Extinguisher Company of Providence, R. I., have prepared a pamphlet on their Rector System of gas heating, which details features of construction and heat control. Points cited for its favor are economy as against coal heating, freedom from dust or odor nuisance, simplicity of operation and control and practicability as a ventilating agent. The pamphlet will be mailed upon request.